ABSTRACT OF A

Lecture

ON

LITHOTRITY AT ONE OR MORE SITTINGS.

Delivered at University College Hospital, Dec. 1878.

WITH ADDITIONS.

BY SIR HENRY THOMPSON,

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AFTER describing the lithotrite, and the manner of employing it, the lecturer proceeded:—

You may naturally ask, "How often is it right to introduce the lithotrite at a single sitting? Is one sitting sufficient for the removal of a stone; and, if so, how often may the lithotrite be introduced, and how long should the proceeding occupy? If not sufficient, how many sittings are necessary or permissible, and what should be the interval of time between them?"

The answers to these questions, which involve several considerations, may be given together.

And, first, it is obvious that, as regards the frequency with which the lithotrite may be introduced, the experienced and dextrous operator may safely use it much more freely than one who is unpractised.

Secondly, if you operate without an anæsthetic agent, you will find that some patients can bear two or three applications of the lithotrite better than others can bear one. But if ether be used, it is quite certain you may remove much more calculous material than without that agent; and, as this result is a great gain for the patient, it is almost always better to attain it. At the same time operate with as much care and delicacy as if your patient were in possession of his senses. Nothing trains the hand so well as employing the lithotrite now and then for a patient who is conscious of what the operator is doing.

Thirdly, it is very desirable to remove the entire stone at a single sitting if prudent to do so, as it leaves the bladder emptied of fragments, and therefore free from a fertile source of irritation. And such has for a long period been my invariable practice, whenever I have thought it possible to effect my object without injuring the bladder by too much or by too prolonged instrumentation. I have often been able to empty the bladder at one application of the lithotrite, aided by that useful instrument the aspirator of Clover, the patient being under the influence of ether. But calculi vary greatly in size, and patients vary as much in liability to those sources of danger which are more or less associated with all instrumental contact. It is a matter of common notoriety to every experienced surgeon that many persons receive an unfavourable impression, and sometimes a dangerous shock to the system, when large metallic instruments are introduced into the bladder, and still more when they are repeatedly and rudely used there. When, therefore, I have used the lithotrite and aspirator from four to six minutes — a time which amply suffices to remove a uric acid calculus of moderate size—I prefer, as a rule, to postpone further proceedings for a day or two—rarely longer,—and to finish the operation at a second or even at a third sitting, beyond which, for some years past, I have not often found it necessary to go. The sum total of the times devoted to such an operation will be at the most twelve or eighteen minutes, ample for the removal of a uric acid calculus weighing four or five drachms, and comprised within a period of from eight to ten days. Mostly the time occupied by a sitting is less than five minutes, and when I operated, as I formerly often did, without an anæsthetic agent, I rarely exceeded two minutes, when of course more numerous sittings were required; but since ether has again come into vogue, I have always availed myself of it, and have made the sitting more productive in consequence.

It has been recently proposed by Professor Bigelow, of Harvard, U.S., to make the rule absolute to remove at one sitting an entire stone, no matter how large it may be or what may be the condition of the patient. Invariable conformity to such a rule, I do not hesitate at the outset to say, will lead to results which, although often successful, will not seldom be disastrous.

Let me state that I have never doubted for an instant that, so far as mechanical power is concerned, almost any stone may be thus removed, and without much difficulty, but I cannot overlook the fact that the vital conditions under which we are compelled to work must limit the employment of mechanical force. In the practice of Bigelow's method, very large and heavy lithotrites are introduced, certainly larger than an ordinary urethra will admit without using force. On seeing them for the first time, I could not help remarking, "Surely these are some resuscitated relics of the early history of lithotrity!" reminding me as they did very forcibly of the terrible engines used by Heurteloup between 1830–40. But what strikes me after all as the most remarkable fact, judging from the very slender experience by which the proceeding is at present supported, is the enormous time which has been consumed with these instruments in performing the task proposed. Thus we find in Bigelow's work,[1] that the duration of a single sitting to remove a stone of less than two drachms was an hour, and for one of less than three drachms an hour and a half! Now, as already stated, the utmost time I ever devote to such stones, and with my small light instruments, amounts to twelve or eighteen minutes, but in two or three sittings of five or six minutes each, all comprised within a period of seven to ten days.

But I am free to confess that the proposal to remove a large hard stone at one sitting is an attractive one. So far from opposing it, I am predisposed to regard favourably any plan by which we may hope to take away, once and for all, the hard and angular fragments which must remain, and sometimes to a considerable extent, after an incompleted sitting. I fully agree with Bigelow that their presence constitutes the chief source of mischief in lithotrity as mostly practised. I only fear whether we may not, *by adopting the system under consideration*, pay too high a price for the purpose of attaining the end proposed. And, in reference to this, I am bound to say that my own system has for a long time past been gradually inclining to the practice of crushing more calculus at a sitting and removing more débris by the aspirator than I formerly did. Thus I have, during two years at least, been in the habit of using in every case two lithotrites alternately (my comparatively small, but strong, flat-bladed instruments); handing the first, when withdrawn, full of débris, to my assistant, who clears it out completely while I am crushing with the other, which in its turn is cleared and again used. Each is probably introduced three times at least, while clogging of the blades with débris is prevented by the clearing process. With these light and handy instruments, which pass with the utmost facility, employed in this manner and followed by the aspirator, I am quite certain that I can remove calculous matter from the bladder more safely and much more rapidly than with the enormous and unwieldy instruments referred to.

I have moreover taken a hint from Bigelow's aspirator, and, slightly modifying Mr. Clover's original instrument, have, I think, rendered the latter more powerful and perfect, while I have avoided some material disadvantages attaching to the former. The new one, in fact, combines the best qualities of both. Thus I have greatly shortened the channel between the bladder and the aspirator, by getting rid altogether of the long arched tube which enters the top of the American instrument, and making the end of the evacuating catheter enter directly, without curve, at the bottom; so saving many inches of the route which has to be traversed by fragments. The new instrument is very easily filled with water, its action is extremely powerful, no air can possibly enter during the process of using it, and the amount of débris withdrawn is at once taken out of the current, and

[1] Lithotomy. By H. J. Bigelow. Boston, 1878. Surely it is scarcely necessary for us to import a new and not very euphonious word to designate the removal of a stone, at one sitting, by the lithotrite and aspirator combined. That proceeding we have hitherto been content to include under the old and well-understood term "lithotrity." The aspirator was long ago invented here, and has been largely used here, and without any addition to our nomenclature. Hence a proposal to use the aspirator more largely than heretofore hardly warrants the use of a new generic term, thereby implying that "evacuation" is a new proceeding—λίθος, a stone; ἀναιρέω, evacuation.

remains undisturbed and visible to the operator throughout the proceeding. I am quite satisfied with evacuating catheters No. 16 in size, English scale (No. 26, French); larger than those are mostly dangerous and wholly unnecessary. There should be several of them, with openings and curves of different kinds, one variety acting better for one patient and another for another. (See Figures 2 and 3 for the more generally useful forms. Figure 1 shows the aspirator.)

Fig. 1.

Fig. 2.

Fig. 3.

A, The funnel and tap by which it is filled. B, the stout india-rubber bottle. C, the tube (with tap) which receives the end of the evacuating catheter; the dotted line shows the inner end of the tube projecting into the aspirator cylinder. D, the glass receiver for the fragments.

But there is a direction for the successful use of the aspirator which Bigelow in his detailed instructions regarding that matter has not alluded to. And I do not hesitate to say that the recognition of the fact I refer to is not less important than all the information which can be obtained by observing the action of the aspirator-currents on fragments in an artificial bag, or even in a human bladder after death, useful to a certain extent as I admit that to be.

I contend that a very important rule in employing any aspirator, in order to ensure the minimum of risk with the maximum of efficiency, is strictly to subordinate its action to the respiratory movements of the patient, especially when these are full and deep, as they are apt to be sometimes under the influence of ether. When the respiration is light and tranquil, the rule is less important. Whatever the position in which you may place your instrument, for effective use it is desirable to make the exit of the fluid from the bladder coincide with the act of inspiration by the patient, since the effect of a full expansion of the lungs is as powerful to remove débris from the bladder as is the exhausting force of the india-rubber ball itself. In illustration, how often has one observed, when an open silver catheter is lying in the bladder of a supine patient, that a jet of urine is propelled to a considerable distance by a full act of inspiration. In using the aspirator, then, I let every movement of the hand holding the indiarubber ball conform to the action of respiration, filling the bladder with the patient's expiration, and gaining the force of his inspiratory effort by simultaneously permitting the expansion of the exhausting ball. Indeed, it is only safe (under ether) to inject the bladder during expiration, while the aspirator is only continuously productive during inspiration. By practice the hand of the operator and the respiratory efforts of the patient work together so harmoniously that, as with myself from long habit, it becomes almost impossible for them to act otherwise. It may be as well to add that the short quick act of expiration which constitutes "cough" is, on the contrary, a powerful expelling agent, and when it occurs, as it not unfrequently does under ether, should always be associated with relaxed grasp on the aspirator, and consequent outflowing current.

Since writing the above, I removed, on Jan. 21st, 1879, a hard uric acid calculus, in a sitting of eight minutes, with the two light lithotrites, in the manner described above, and with the aspirator, the débris weighing, when dried, two drachms—a weight exceeding that of the calculus reported by Bigelow as occupying one hour for its removal with his instruments. The patient, aged sixty-nine years, was brought to me by Mr. Lathbury, of Finsbury, who was present, as were also Mr. Clover, who gave ether, and two other medical men. The bladder was entirely cleared; scarcely any blood was seen; no fever followed, and the patient is doing extremely well. I regard this example as an admirable illustration of the capability of the existing lithotrites and of the existing method; the application of the latter, I am ready to confess, having been extended in point of time beyond the limit which I formerly considered prudent or practicable, and which I still consider to be so only in tolerably practised hands.

Clinical Lecture
ON THE
TREATMENT OF DELIRIUM TREMENS.

Delivered at the Royal Infirmary, Edinburgh, on March 11th, 1870.[1]

BY GEORGE W. BALFOUR, M.D. ST. AND.,
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GENTLEMEN,—Having now had, in the ordinary course of our clinical rotation, for some little time under my care Ward 10, into which are admitted all maniacal and noisy cases, as well as those suffering from the effects of drink, and as the results obtained during that short time have been somewhat remarkable, I wish to make you acquainted with them; and also to guard you against a dangerous fallacy, which, to my astonishment, I have found to be still somewhat prevalent.

You are aware that the drink cases admitted into Ward 10, and usually classified under the heading of "delirium tremens," include every variety of alcoholic poisoning, from the excited, fidgety, and prostrate condition popularly known as "the horrors," up to the very worst type of delirium tremens, often ushered in by severe and repeated epileptic attacks, forming a true *status epilepticus precursor*. You all know, I dare say, that, up to a comparatively recent date, the production of sleep was, very properly, as I think, regarded as the most important part of the treatment of this disease, and that this was sought to be induced by most unjustifiable doses of narcotic poisons. Subsequently, chiefly owing to the writings of Dr. Ware of Boston, delirium tremens came to be regarded as not in itself so dangerous as the means employed to cure it—to be looked on, in fact, as a disease which might safely be left to itself, and which terminated naturally in from sixty to seventy-two hours. More recently still, modern chemical research having supplied us with safer and more active nervine sedatives, the production of sleep has again been recognised, not as a *sine qua non* in the sense of the former dogma that the patient must sleep or die, but as a very important and most efficacious means of cutting short the attack,—so safe and efficacious, indeed, that it seems almost a premium upon vice to promulgate it, though it is neither safe nor efficacious unless it is properly employed; this, however, has relation to the causation of the disease, of which I shall presently speak.

[1] With a postscript bringing it up to date.

Twenty (now thirty) years ago the formula in use for delirium tremens cases in Ward 10 was, tincture of opium one drachm, tincture of hyoscyamus two drachms, common spirit (whisky) one to two ounces, given in a sufficient quantity to produce sleep. It seems impossible to account for the manner in which this most dangerous treatment was adhered to for years, except on the supposition that it was made to be less dangerous than it seems by that antagonism between opium and hyoscyamus which has been shown to exist by Mr. Benjamin Bell and others (more recently by Dr. Chevers and Professor Fraser). Be that as it may, there can be no reason to doubt that this treatment must have been most positively injurious in all but the most wary hands, too often substituting opium for alcoholic poisoning, and that it only maintained its ground because it was less fatal than the indiscriminate bloodletting which, as a treatment, immediately preceded it. And amid the many attempts every now and then made to revive the practice of bloodletting in inflammatory affections, it may serve to strengthen the principles in which you have been trained to remember that arguments precisely similar to those made use of as to its efficacy in inflammations were formerly employed in favour of its use in delirium tremens—a disease which it only too often fatally cut short, yet one which is now-a-days rapidly and safely cured without it, though no one as yet has broached the theory that there is any change of type in this form of disease.

The treatment recommended by Mr. Jones, of Jersey, has never obtained any footing here. It consisted in administering half a fluid ounce of tincture of digitalis at once, and half of that dose, or two drachms, every two or three hours afterwards for twice or thrice. I have known many who preferred this treatment to that of opium; I myself believe it to be less dangerous, but, though I know that half a fluid ounce of tincture of digitalis is not necessarily a fatal dose, I cannot help thinking it to be a dangerous one. It contains very nearly double the quantity of the drug which old Withering used to give, and the symptoms he often produced are not those likely to conduce to the safety of a patient suffering from delirium tremens.

The treatment by large doses of cayenne pepper, recommended by Dr. Kinnear—scruple boluses repeated every two or three hours—was also never adopted here; yet it was never dangerous in itself, and was often rapidly curative, as I myself have frequently had occasion to observe in private cases.

The expectant treatment, however, introduced by Dr. Ware of Boston, was largely employed here, and gave rise to a free use of the dark and padded cells, which, I dare say, few of you have ever seen, and which are relics of a time when, as is but right, the treatment of lunacy was part of the daily duty of the physicians of the most complete and perfect teaching hospital of its day. Under this expectant method the patients undoubtedly recovered; but they were a good while about it, and during the process they ran many risks of various kinds—risks to themselves from their own violence, besides risks from constitutional exhaustion, from exposure to cold, and all that in such cases may flow from that, including subsequent inflammatory attacks &c. I have tried this system very freely, and can assure you that the various risks were not small, though, with careful watching, the ultimate success was extremely gratifying.

Next followed the use of tartar emetic and ipecacuanha, as recommended by Dr. Peddie, of this city. I do not know that this treatment ever obtained any footing in this institution; it was less injurious than the opiate treatment, more dangerous except in skilful hands than the expectant treatment, and not more successful. But, on the other hand, it was most useful in cutting short a debauch, a full emetic of tartarised antimony seldom failing to put a speedy end to the most prolonged debauch, while, as it can be easily administered in the drink taken, it even yet may prove a most useful and efficient adjunct in the treatment of such cases.

Chloroform has also been employed in the treatment of delirium tremens, but it has proved unreliable, and too often dangerous.

The introduction of the bromide of potassium into medical practice, and its recognition as a safe and reliable nervine sedative, ushered in a new era in the treatment of delirium tremens. Instead of waiting and watching through a tedious convalescence, during which the patient ran various risks of death, from twelve to twenty-four hours' treatment was enough to induce a sufficient amount of refreshing sleep to restore the patient to a rational condition and speedy convalescence. From a pretty considerable experience of this treatment, I can say that it only failed in very exceptional conditions, and in some of these failures the cure was completed by the subcutaneous injection of morphia; while the few cases in which death occurred were in patients exhausted by primary disease or maltreatment, or affected by severe epileptic convulsions—a form of disease usually amenable to the bromide of potassium, but which, as a precursor of delirium tremens, too often proved intractable and fatal. Only in the very rarest cases was it found necessary to conjoin this treatment with the administration of stimulants, and these cases were always tedious and most unsatisfactory. On the other hand, several cases treated outside, ineffectually, by the bromide of potassium accompanied with stimulants, were at once cured by the same remedy *minus* the stimulants. One of the most remarkable of these cases was sent in by a medical man, who seemed to think the case a very serious one. He anxiously inquired if I thought it possible that the patient, should he survive, would be well enough to be removed at the end of a fortnight, as his passage to America was taken, and his friends were anxious to get him away. He smiled incredulously when I told him if he called back next day he would find his patient either well or asleep, and fit to be removed at the end of a week. The result was, however, as predicted, and my friend is now a firm believer in the air of No. 10, though still sceptical as to the virtue of the bromide of potassium. The dose of the bromide was, however, large—half a drachm or more; and required to be frequently administered—every hour,—and that often till so much as ten or more doses were given before it took effect. In such cases this frequent repetition of the dose was always irksome and often troublesome, and the recent introduction of the hydrate of chloral was therefore welcomed as a possibly useful substitute. The first case of delirium tremens submitted to it was one of a fortnight's duration and of maniacal ferocity. He had had the bromide of potassium at home, and was sent in because it was found impossible to manage him, and his case was looked upon as most dangerous. Two doses of hydrate of chloral, of thirty grains each, with an interval of an hour between each dose, sufficed to induce refreshing sleep, from which the raving maniac awoke a rational man, acquiring no further special treatment. Similar success has attended the chloral treatment in all the cases of delirium tremens which have been admitted to Ward 10 of late. In several severely maniacal cases a dose of forty-five grains has been administered, with a result equally gratifying and surprising. In a case of puerperal mania one such dose sufficed to restore reason to the patient, at least so far as quietness and docility were concerned, though it completely failed to make her believe that she ever had given birth to a child.

So far, therefore, as our present experience is concerned, we seem to possess in hydrate of chloral a remedy which in all such cases, from the slightest to the most severe, acts rapidly, safely, and efficaciously—*cito, tuto, et jucunde*—and which seems to deprive indulgence in drink of all its horrors and nearly all its dangers. Unquestionably fatal cases must occasionally occur under this as well as under other modes of treatment, but the number of them must be much decreased, because, from the rapidity with which a cure is brought about, many dangerous risks are averted. Thus, we avoid all the risks arising from a long continuance of maniacal excitement, or from a suicidal state of mind, all risk from the exhaustion following persistent sleeplessness, or defective nutrition, the result of long-continued insufficiency of food, &c. The risks the patient actually runs are not now, as formerly, connected with the treatment, but with his previous state of health. Thus, if he has a fatty heart, or has been exhausted by long-continued debauchery, or if he is from any cause an epileptic, he may die suddenly during the attack. But if he is otherwise healthy, he is sure of a safe and speedy convalescence.

So much for the treatment of delirium tremens. The fallacy to which I promised to direct your attention is this—that delirium tremens does not arise from drinking, but from ceasing to drink. In regard to this matter I myself have no doubt, and my confidence is derived from two sources:—First, I have found that so long as you permit your patient to obtain drink just so long will his disease prove obstinate and intractable to treatment; while when you continue the treatment, minus the drink, the cure is rapidly obtained. Of this we have had many examples, and it is this which has gained Ward 10 its well-earned

reputation. Secondly, by stopping a man in his drinking by means of an antimonial emetic, you may often save him from an impending attack of delirium tremens, but you will never bring on one. Having had repeated occasion to employ this treatment, I speak with perfect confidence as to its results. It is quite true that when delirium tremens occurs the patient has usually ceased to drink, but this is solely because his stomach or his system rejects it. The enforced abstinence is the first stage of delirium tremens, not the cause of it. And this ceasing to drink is not an invariable concomitant of this disease; for I have seen men afflicted with delirium tremens carry on their drinking so far as their stomachs would allow them, and only cease to take drink when the stomach could no longer be induced to retain it. The delirium tremens in such cases—untreated, or imperfectly treated as it used to be—was always cumulative, and rapidly increased after the drink was stopped. But my experience has always been that the longer the drinking was carried on the more severe the disease, and that by stopping the drink early we could always ensure a milder and safer disease. I am quite certain that all the best observers are of this opinion; Laycock and Gairdner have openly expressed it, and every prison surgeon with whom I have conversed has always given me the same answer—viz., that though they had seen many patients who had been drinking heavily before their apprehension and committal, they have never once seen delirium tremens originate from the sudden stoppage of the alcohol. But the converse is, I know, an opinion very widespread, not only among the public, but even among the profession, and I wish to warn you against it. You are often told that so long as you can keep a man drinking, he will keep free from delirium tremens. Don't believe it. So long as he keeps drinking, he usually keeps free from a bad attack, because a serious attack, as a rule, is associated with a loathing of drink; but he keeps always coming nearer and nearer to it, and the sooner you can arrest his drinking bout, the less risk he has of having an attack at all. I speak with great confidence on this point, having had considerable experience of such cases—an experience in every case bearing out what I have said. Again and again I have arrested drinking bouts in those verging on delirium tremens with a rapidly restorative effect, and I have often sent patients into Ward 10 for this purpose, and always with the same good results; while I have just as often seen the cure of delirium tremens delayed or indefinitely postponed by the continuous administration of drink along with the appropriate remedies, the same remedies acting like a charm when the drink was completely stopped. I trust, therefore, that you will never think it necessary to keep a man drinking to keep him free from delirium tremens; you will remember, I hope, that the very reverse is sure to be the result, and also that the administration of alcohol in any form during the course of delirium tremens is only necessary in the rarest cases, where the exhaustion is great, and even in these cases it delays the cure. Under the chloral treatment, which is so rapid in its action, I believe it possible that alcohol may never be required in the treatment of such cases, and that ordinary tonics may supply its place; but in regard to this I cannot, of course, as yet speak with any confidence.

There is one other point to which I would like to direct your attention. It is nearly forty (now fifty) years since Ware pointed out that delirium tremens was a disease which naturally ran its course in from sixty to seventy hours, and that it was safer to allow it to do so than to treat it by the remedies then in vogue—large bloodlettings or poisonous doses of narcotics. It was more than twenty years before these doctrines became sufficiently spread abroad to produce much fruit. And in the most recent publication on the subject I am acquainted with[1] it is stated that this doctrine of the definite course and duration of delirium tremens ought to make us slow to entertain any extravagant expectation of materially abbreviating its duration by therapeutic measures. These words, taken in conjunction with what we know of the treatment of delirium tremens by bromide of potassium, and especially by chloral, convey to us a most important lesson, because they teach us that our power to cut short and cure disease is limited not so much by the nature of the processes involved as by our ignorance of the means to be employed. As I believe this is the last occasion this session on which I shall have the pleasure of addressing you, I am not sorry to be able to conclude with a statement which I hope shall awaken in your minds some interest in the science of therapeutics, for which a bright future is yet to come, and without which medicine, as a practical art, could have no interest for mankind.

P.S. (December, 1878.)—Ward 10, which used to be under the care of each of the infirmary physicians alternately for a period of three months, is now placed under the care of one of the assistant-physicians, so that henceforth I am not likely to see so much of delirium tremens as heretofore. I wish, therefore, to record that my experience of its treatment by chloral during the last nine years has been most satisfactory. It has, however, been my experience that there are very few cases indeed which yield to a less dose than fifty grains, and a considerable number which require a good deal more; those cases requiring the largest doses being those ushered in by the *status epilepticus*, which chloral arrests as rapidly and safely as it does delirium tremens itself. But even in these cases I have never required to give more than 120 grains of Liebreich's chloral, in divided doses, and this dose, though large, is not a dangerous one. Richardson tells us that the dose of chloral is proportionate to the weight of the animal, that a human subject weighing 120 to 140 lb. is thrown into a deep sleep by a dose of ninety grains, and into a sleep that is dangerous by a dose of 140 grains. He finds also that an individual who has taken enough of chloral to be affected by it gets rid of it at the rate of seven grains an hour, so that though 144 grains given at once is a dangerous dose, yet twelve grains may be given every two hours for twelve times with perfect safety. From the irritated condition of the mucous lining of the stomach of a drunkard it is probable that the absorption of ingested fluids is not so rapid as usual; it is but fair, therefore, for that reason also, to allow a moderate interval between the doses, so as to avoid as far as possible any risk of giving more than enough. At the same time we must shun the opposite extreme of giving doses in themselves too small to have any decided effect, and which have any possible cumulative effect destroyed by too long an interval being permitted to elapse between the giving of each dose.

Acting upon the principles involved in the foregoing statements, I have for long been in the habit of treating cases of delirium tremens by giving forty grains of chloral hydrate every hour, for three times if necessary. Sometimes, but rarely, the first dose has been enough, most commonly two doses have been required, and it has only been in the very rarest instances that the third dose has been necessary. If the attack be ushered in by the *status epilepticus*, I shorten the interval between the doses to half an hour, as in these cases time is of the utmost importance, and a large dose is sure to be required. Should the heart be feeble, I give each dose of chloral in half an ounce or an ounce of the infusion of digitalis; the chloral, unlike the bromide, has no tendency to weaken the heart's action, while, like chloroform, it seems to induce a more equable distribution of the blood, the digitalis toning the heart, and increasing the arterial blood-pressure. Even should pneumonia be present, though the risk to the patient is enormously increased, the treatment does not require to be in any way modified; it is still of the utmost importance to quiet the nervous system, and to keep up the heart's power; while, even *quoad* the inflammation, the treatment is not the worst that can be employed, and is indeed that with which I have for many years treated all my cases of pneumonia, as all my students know, with great relief to their sufferings, and with at least an average amount of success; this treatment being indeed an improved and modern analogue of the chloroform treatment which proved so successful in the hands of Varrentrap, myself, and others, three cases of which were published in THE LANCET for April, 1869, by my then resident medical officer, Mr. Frank Hodges, F.R.C.S., now of Leicester.

[1] A paper by Dr. Cumming, of Belfast, in the Dublin Journal of Medical Science, vol. xlix., 1870, p. 74.

ASSOCIATION OF SURGEONS PRACTISING DENTAL SURGERY.—The annual general meeting of the above Association was held on Wednesday, January 22nd, when the following officers were elected for the ensuing year:—President: S. J. A. Salter, F.R.S. Vice-Presidents: J. A. Baker, Samuel Cartwright, W. A. N. Cattlin, Alfred Coleman, and John Smith, F.R.S.E. Treasurer: T. Edgelow. Hon. Secretary: J. Hamilton Craigie. Council: S. H. Cartwright, J. Fairbank, F. Fox, G. Gregson, W. Donald Napier, George Parkinson, John H. Parkinson, W. G. Ranger.

ON CHRONIC BRIGHT'S DISEASE, AND ITS ESSENTIAL SYMPTOMS.

BY F. A. MAHOMED, M.D.,
MEDICAL REGISTRAR TO GUY'S HOSPITAL.

(Continued from page 78.)

THE chief object of these papers is to draw more general attention to the extreme importance of the recognition of high arterial pressure by the pulse, and to prove, as far as possible, how necessary it is to gauge carefully this condition, and to regulate our treatment by it. If I say that it is necessary to recognise fever as a symptom, and often to treat it, who will gainsay me? Yet I can assert with equal certainty that it is as necessary, or even more so, to recognise and estimate arterial pressure; but how few, comparatively speaking, think of doing so! The utter recklessness with which this condition is overlooked may be compared to that of a man who piles coals upon his engine fire and neglects to take notice of his pressure gauge; anon his boiler bursts, and what cause is there for surprise? The two cases are exactly parallel. How frequently are patients allowed to die—nay more, even killed—when their hearts are failing from the terrible arterial pressure they can no longer overcome: their flagging, overtaxed ventricles dilate; the wretched, feeble, labouring pulse is thought to mean weakness, which requires stimulation; its *persistence*, which indicates the fatal over-distension of the arteries, is passed unnoticed; and the struggling heart, at length fainting at its work, stops, and thus the patient dies for want of a lancet or a purge! This, indeed, is no exaggerated picture. But it is not with these extreme cases that we have alone to deal; it is over a far wider area that my subject stretches. The pulse of high pressure reveals to us the existence of a great diathesis, the subjects of which are liable to suffer from a large group of diseases, all of which may be included among the complications or modes of termination of that disease known as chronic Bright's disease (or arterio-capillary fibrosis). It occurs and can be recognised in early life. It gains ground year by year; and if it is not only suffered to go unchecked, but, as is frequently the case, the conditions which tend to produce it are exaggerated by the mode of life of the individual, it finally gains the mastery over its victim, and he dies the subject of chronic Bright's disease, either by failure of his heart or of his lungs (for they become emphysematous), by rupture of a cerebral bloodvessel, by angina, perhaps by aneurism, or by functional failures, including many commonly called uræmic; or at any time his condition may be intensified, the disease becomes "acute," and the termination is brought about by symptoms resulting more directly from the kidneys, the tubes of which becoming plugged with epithelium or blood-casts, the patient becomes waterlogged, recoverably or irrecoverably according to circumstances. This is the case when the condition of high pressure is a constant one. But, on the other hand, it is well to remember that this symptom is a functional, not an organic one; that it is liable to vary under certain influences, even in persons in whom it is present as an otherwise constant condition, and in whom it eventually produces organic disease; while it may also occur as a temporary condition in others in whom it is usually absent: its presence is then associated with certain other symptoms which I need not here relate, and it is recoverable by treatment.

As, then, my whole argument hangs upon the occurrence of this condition and its discovery, it will be necessary before I proceed further to detail at some length the manner by which it can be recognised. This may appear at first sight superfluous, but indeed it is not so. During several years I have constantly endeavoured to recognise and appreciate the pulse of high pressure. I have sought for it under all circumstances and in all diseases, yet still I must confess that I often mistake or overlook it. It is to me one of the most difficult symptoms to recognise among all our physical signs of disease; therefore I apprehend that, although much has been said concerning it, it is yet permissible to add still more. First let me say that the sphygmograph affords always the best and surest indication of it; although our fingers may be educated to recognise it in most cases, yet there are some in which we can never appreciate it by touch alone, although such are exceptional. Certainly at first we require to frequently appeal to the instrument to confirm or correct our diagnosis by the finger. It bears the same relation to our appreciation of the pulse that the thermometer does to our appreciation of the body temperature; a skilled and experienced hand may, by means of the thermometer as an educator, learn to recognise more or less approximately the temperature of the body, but it will never attain to absolute accuracy, and will not unfrequently fall into considerable error; so is it with the sense of touch and the pulse. I do not propose to detail here the sphygmographic signs of high pressure; that has been done often enough elsewhere; but I will try to indicate the method of its recognition by the finger.

The pulse of high pressure has been described under various titles, but none of them are satisfactory, because each describes one character, but no one title includes all; thus it is known as either the *hard*, *cord-like*, *persistent*, *long*, or *slow* pulse. Now, in enumerating all these forms, I have mentioned all the qualities of the high-pressure pulse, but they are not all present in every case in which the condition occurs. The quality which is least constant is the one by which the pulse is most commonly described—the *hard* pulse; this description is, therefore, the most objectionable; while the most constant sign is that described by the last term—the *slow* pulse; and this term is the one least frequently employed, and is also that which is least generally understood.

Let us now take a pulse and examine it with a view to determining whether or not high pressure exists in the vessels. Having recognised the position of the artery, first pass the finger very lightly to and fro transversely across the wrist; if it appears to pass over a ridge each time it crosses the vessel, and this ridge is there at all times, irrespective of the pulsation of the artery (in other words, if the artery is constantly distended, during diastole as well as systole), then the pulse is called *persistent*, and this is one of the most constant and reliable symptoms of high pressure. It means that the arteries are constantly full; they cannot empty themselves as readily as they should do in health, and, remaining thus overfull, they offer an increased resistance to the cardiac contraction; for it is manifestly more difficult for the heart to empty itself into arteries which are already fairly full of blood than into arteries which are nearly empty. Thus the ventricle, having more work to do, takes a longer time to do it in; hence the *systole is prolonged*, and the systolic expansion of the pulse is also prolonged, and the tidal wave in the tracing is unduly sustained. This gives to the pulse the character which the old physicians described as the *pulsus tardus*, as opposed to the *pulsus celer*. (This was long ago pointed out by Dr. Burdon-Sanderson, and since then by others.) It is the most valuable and important sign of high pressure; it is the sensation of *slow* and *long* expansion which some pulses give to the finger, and the gradual way in which they subside, as opposed to the sudden subsidence and rapid falling away of the "quick" or "short" pulse. Types of the latter are seen in the "splashy" pulse of hæmorrhage or aortic regurgitation, while the pulse of Bright's disease is typical of the former. The two terms, *slow* and *long*, are synonymous; and the latter is more convenient, for the former is liable to be confused with or mistaken for *unfrequent*, as opposed to *frequent*—terms which, correctly speaking, should be used to denote the frequency of the beats per minute in place of quick and slow, which are commonly so used. These characters of the *long* and *short* pulse, and the use of the corresponding terms by the ancients, have been dwelt upon by Dr. Burdon-Sanderson in his classical little book on the Sphygmograph, published in 1867. In that work he pleads, much more powerfully than I can ever do, for what I seek to enforce to-day; yet it appears to me that his teaching, vastly important as it is, has not received the attention it deserves; indeed, it is unknown to, or is forgotten by, the great majority of the profession. I find, indeed, that he there states a belief in the great doctrine I am seeking to prove—namely, that there exists a large class of people who constantly have *long* pulses, or pulses of high pressure, and that this is the indication of a diathesis which the old physicians—who, I cannot but think, were far keener observers than we generally give them credit for—recognised and treated. I feel sure that the doctrine of diathesis, or temperaments, will rise again, even in our generation, as a far more enlightened and complete conception than that which has been, or is at present, held concerning it, and

that it will prove an invaluable guide in diagnosis and in treatment. In saying this, I am again echoing the words of that distinguished physiologist, but it is a lesson which the sphygmograph has taught me, as it taught him, and as it must teach everyone who constantly employs it and seeks to profit by its use. To return to the point from which I have digressed, let me add that Marey has lately formulated a law which I believe from my own experience is true, and which both accounts for and explains the *long* pulse: Marey says that *the length of the ventricular systole is directly proportional to the arterial resistance;* in other words, if the arterial pressure is increased, the systolic expansion must be proportionately increased, and the pulse become *long*.

The quality of *hardness*, when applied to the pulse, means its resistance to extinction by compression; it is not easily compressed by the finger. This quality is not always present in the pulse of high pressure, though it very generally is so. It indicates the force of the ventricular contraction. A strongly or excitedly acting heart produces a *hard* pulse; so also hypertrophy of the heart produces it. The *hard* pulse may therefore be a functional or an organic condition; but if the heart dilate, and its action becomes weak and failing, as it is very apt to do under high pressure, the pulse no longer remains *hard*, it may now appear *feeble* or *soft*, although *persistent* and *long* as before. A dilated heart may, however, give a covertly *hard* pulse—one, that is, which is not immediately recognised as such. It appears at first a feeble, easily compressed pulse, but if it be studied more carefully, it will be found that, behind its apparent feebleness, there remains a very considerable lifting power, which, though not discoverable at once, comes out by careful manipulation.

The *cord-like* pulse is said to be characteristic of high arterial pressure; under this term are included two distinct conditions. A pulse is said to be *cord-like* when it can be traced like a cord up the arm, rolled under the finger, and resembles to the touch the vas deferens. This character may be produced by mere *persistency* of the pulse, or overfulness of the vessels, although it appears as if due to an actual thickening and degeneration of the coats of the artery, so hard, knotted, and irregular does it feel; yet such a pulse can often be made to disappear by treatment. On the other hand, there is also a cord-like pulse which is really due to thickening and degeneration of the arteries. To distinguish between these two forms of *cord-like* pulse, the functional and organic, we must proceed as follows:—Place the index-finger of one hand upon the pulse, and having carefully observed it, compress the artery firmly against the radius by means of the other hand, immediately above the point of observation. Let the pressure be so complete as to effectually arrest the flow of blood; now carefully examine the empty artery with the index-finger previously employed; in most cases it will be no longer distinguishable, but if it still remains so, it is probably due to thickening of the vessels, and the case is one of general arterial disease. If this test be carefully employed, it will be found that thickened radials do not occur so frequently as is thought to be the case, at least not such thickening as can be recognised by the finger.

The pulse of high pressure may be either *large* or *small*. This quality depends chiefly on the relaxation or contraction of the arteries; if they are relaxed, the pulse will be large, and even have a tendency, perhaps, to slight dicrotism; but it will remain persistent and long, for although the arteries are relaxed, the resistance (which I believe exists in the capillaries) is still present, and the cardiac systole is still long, perhaps laboured, though not so much so, possibly, as before. Relaxation of arteries may give temporary relief to an overtaxed heart by permitting it to empty itself more completely for the time, but it does not appear to afford any permanent benefit. If, however, these directions be all carried out with the most scrupulous care, it still occasionally happens that we remain in doubt, or fall into error, as to whether the pulse is one of high pressure or not. For example, a pulse frequently feels persistent when the arteries are relaxed and the pulse dicrotic—that is, when the very reverse condition to high pressure exists,—the fulness of the pulse and the large dicrotic expansion giving it sometimes even a sensation of *length* to the finger. It appears also that in some cases an unusually superficial vessel may give the character of persistence, especially if the pulse-wave be a large one.

Fortunately, however, we have a means of checking our observations on the pulse, and this should be employed on all occasions. Dr. Sibson has pointed out the signs of high arterial pressure to be found in the heart—namely, a long or reduplicated first sound heard over the intra-ventricular septum, and an accentuated second. These variations in quality of the cardiac sounds appear to me to be of the utmost importance, and very frequently furnish most valuable information. The accentuation of the second sound is easily appreciated in any case in which the pulse is that of high pressure; but if this quality of the second sound is not present, it may generally be assumed that an error has been made with regard to the pulse. With this, as with all other signs, fallacies arise; and it is not unfrequent to find a markedly accentuated second sound when the arterial pressure is low. I think I have more particularly noticed this to occur during the convalescence from acute rheumatism, and it is, of course, present in all cases in which the pulmonary circulation is impeded; in the latter cases it is well known to be due to accentuation of the sound produced by the closure of the pulmonary instead of the aortic valves, and probably it is due to this cause also in the other cases in which it is heard accentuated when the arterial pressure is low, though how this high pulmonary pressure is brought about it is not so easy to say.

So far, the chief symptoms with which we shall have to deal have been discussed, having in view the importance of recognising their existence and appreciating their significance. It now remains to see what relation they bear to the disease under consideration, and in what measure they form part of it. In considering this question, I think we shall find that the diagnosis of chronic Bright's disease must rest on other signs than those upon which reliance is usually placed.

(To be continued.)

A CASE OF CONSERVATIVE SURGERY.

BY WILLIAM PRATT, F.R.C.S.,
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To save a limb, or a part of a limb, which has been to all appearances hopelessly injured by accident, has always seemed to me the highest triumph of surgery. *Amputare opus est manus, conservare opus est mentis.* The following case illustrates what may sometimes be done in seemingly desperate circumstances.

R. M——, aged thirty-five, is head dyer in the Welsh Woollen Mills. At 9.30 A.M. on Sept. 30th he was putting the belt on the driving wheel of the fan of the scouring machine, when his right hand got somehow caught, and dragged in betwixt the cogs of two adjacent wheels. The machinery was stopped as soon as possible, the hand was extricated, and I, being sent for, found the following injury:—The first metacarpal bone of the right hand was broken about its middle, and its lower extremity, with thumb attached, was almost literally torn away, lying on the palm, adherent only by some skin and underneath tissue. The whole of the muscles of the thenar region were bared and torn, the tendons of the extensors and long flexor were snapped asunder at various lengths, and lying exposed in the wound. The rest of the first metacarpal bone was bared of periosteum and all other coverings up close to its articulation with the trapezium. In the hypothenar region a deep and jagged wound extended from close to the wrist down to the first phalanx of the little finger, opening the fifth metacarpo-phalangeal articulation; it then turned outwards, and opened the fourth metacarpo-phalangeal articulation; it now turned round the third metacarpo-phalangeal joint, opening it behind, and dislocating the first phalanx forward on the metacarpal bone. It thence continued in front of the metacarpo-phalangeal joint of the index, not opening it, but destroying the skin, and here joined the large wound on the thenar side. In the bottom of this extensive wound lay the fourth and fifth metacarpal bones, smashed. The hæmorrhage was insignificant, but the pain was terrible. I at once fomented the whole hand with warm water, and swathed it in warm cloths. This speedily subdued the agony, and the patient was able to walk home, a short quarter of a mile distant.

On his arrival there the poor fellow realised the possibility of losing his right hand, and earnestly prayed me to spare a portion. Certainly amputation of the whole hand seemed the only possible thing to be done. Yet, after another brief examination, I determined to save the palm with the index and middle fingers. The thumb, of course, was beyond salvation, as also were the fourth and fifth fingers. I argued with myself that to remove the entire hand, unless absolutely compelled, would be to deprive the poor man more or less of the means of gaining his livelihood. At his age he could never acquire great command over the left hand. If I could save only the index with the palm he would be able to do a great deal; he would be able to grasp and to carry, and with a simply contrived instrument he would be able to use pen and pencil, and altogether he would be capable of doing many things which no apparatus constructed to take the place of the hand could ever possibly do. I resolved to spare the third finger, fearing that it would stiffen, and to allow it to stiffen in a flexed position for support. I knew of the possible dangers from tetanus, traumatic gangrene, and erysipelas; but the man himself was healthy, he had never been addicted to drinking, and he would receive kind nursing in his own home with plenty of fresh air. I therefore put aside these perils as amongst the remotest possibilities. Mr. Healy, of the Montgomeryshire Infirmary, gave chloroform, and, with the assistance of my colleague, Mr. Monro, I first removed the thumb with its fragment of metacarpal bone, sparing all that was possible of the soft parts for a covering. I next grasped the upper fragment of the same metacarpal bone with a lion forceps, and, with a few touches of the knife, disarticulated it from the trapezium. I also cut away all the exposed tendons. I then utilised the great wound in the hypothenar region, and through it removed the ring and little fingers, with the lower portions of their metacarpals. I saved the upper halves thereof, snipping off all the jagged points with a bone forceps, so as not to open the common synovial sac. The dislocation of the third finger was reduced, and the reduction remained. The whole was now carefully washed, and all the parts brought together as far as practicable by silk sutures. I did not expect that I should get union by primary intention; the hashed and contused condition of the soft parts forbade that, but I did expect what I got, that the parts would remain in apposition, and therefore in good form. Finally the hand was wrapped in lint dipped in carbolised oil, bandaged to a well-padded splint, and the patient sent to bed.

During the whole of the manipulation very little blood was lost. The palmar arch was untouched, and only a thumb-branch of the radial required a ligature. The dressings were not meddled with for forty-eight hours. The patient slept fairly by means of an opiate, and I at once put him on the best mutton-broth and beef-tea.

On the third day I removed the dressings. There was a good deal of the hashed tissues on the thenar side going to slough, but nothing to alarm me. The fourth and fifth days I continued the carbolised lint dressing, but on the sixth, perceiving no progress, but the entire wound to look angry and sloughy, having first well washed the whole with carbolised water (1 in 40), I wrapped it in a hot linseed-meal poultice, the face of which I covered with carbolised oil. These poultices I ordered to be renewed every four hours. Had it been possible, I would have used the warm bath from the beginning, but as this could not be provided in the home of a working man I used the next best thing, and it answered perfectly. On the eighth day I removed all the stitches; there was scarcely any union, but the parts were lying in good position. I now strapped the whole with adhesive plaster, continuing the hot poultices as before. This plan I pursued for ten days, changing the strapping and washing the wound well with weak carbolic lotion every morning, and having the poultices renewed every four hours, night and day, with the utmost regularity. Henceforward nothing could have gone on more favourably. The pulse, which had become accelerated, became normal; the temperature, which had risen to 101°, sank to 98·5°, to rise no more. Every uneasiness about the hand disappeared; the slough rapidly cleared off, fine healthy granulations arose, and the patient ate and slept well. At the end of ten days I left off the poultices, strapping simply with plaster. At the end of the third week the patient was up and about, at the end of another all was healed.

Two months after the accident the patient called upon me. He had been at his usual work for some time. He had perfect power over the index finger; he could do anything with it, and was having a broad pen-and-pencil holder made to be fastened on by elastic bands, by which he was confident that he would do all his correspondence as well as ever he did. And further, to my great gratification, the third finger was fairly mobile. The patient himself was applying passive motion to it daily so as to break down all adhesions formed by its tendons, and I have not the least doubt but that in a short time he will be able to use it almost, if not quite, as well as the index.

I need scarcely say that R. M—— is very well pleased with the result, and is extremely grateful to me for having saved so much of a hand which at one time seemed wholly devoted to the amputating knife.

Newtown, Montgomeryshire.

NITRO-GLYCERINE AS A REMEDY FOR ANGINA PECTORIS.

BY WILLIAM MURRELL, M.R.C.P.,

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(Continued from p. 115.)

DURING the last nine months I have treated three cases of undoubted angina pectoris with nitro-glycerine, with what success the cases themselves will show.

William A——, aged sixty-four, first came under observation in December, 1877, complaining of intense pain in the chest, excited by the slightest exertion. It was distinctly paroxysmal, patient being perfectly well in the intervals. The first attack was experienced in September, 1876. Patient was at the time in his usual health, and was, in fact, out for a day's pleasure in the country. The pain seized him quite suddenly when walking. It was a most severe attack—as severe a one as ever he experienced in his life. It caused both him and his friends great alarm, and they were most anxious that he should return home at once. He cannot tell at all what brought it on; he had been enjoying himself very quietly; it was not by any means a cold day, and he had not been running, or even walking faster than usual. He remained perfectly well until the following April, when he experienced another similar attack; and since then he has been suffering from them with increasing frequency. From September, 1877, they have been a source of constant anxiety, and it was only by a determined effort that he could continue to follow his occupation.

The attacks usually commence with a feeling of warmth, then of heat, and then of burning heat, in the chest, immediately followed by a heavy pressure, from the midst of which proceeds an acute pain, so that in a moment the whole chest seems as if it were one mass of pain. It is almost impossible, he says, to describe it, for he never felt anything like it before. The pain is first experienced at a small spot on either side of the sternum, corresponding to its junction with the fourth costal cartilages. From the chest the pain flies to the inner side of the arm, at a point midway between the shoulder and the elbow. It runs down as far as the elbow, but never to the fingers. It is not more severe on one side than the other. During the seizure the patient suffers most acutely, and feels convinced that some day he will die in an attack. He usually experiences some shortness of breath at the time, but there is no feeling of constriction about the chest. He can speak during the seizure, though with some difficulty. The attacks are not accompanied by any sensation of warmth or chilliness, but patient is under the impression that he grows pale at the time. These attacks are induced only by exertion in some form or other, most commonly by walking, and especially by walking fast. Walking up hill is sure to bring on a seizure. Stooping down has a similar effect, and the act of pulling on the boots will excite a paroxysm almost to a certainty. He is almost afraid to stoop down, and when he wants to pick up anything from the floor he goes down on his hands and knees. He has a slight cough, but although it shakes him at times it never brings on the pain. The attacks are not excited by food, but exercise taken after meals is more

likely to induce them than when taken on an empty stomach. Patient has noticed that they are far more readily excited immediately after breakfast than at any other period of the day. They are more readily induced, too, after an indigestible meal than at other times, but patient is quite clear that no amount of indigestible food *per se* will bring on an attack. The paroxysms, as a rule, last only three or four minutes, but occasionally from twenty minutes to half an hour. If they come on whilst he is walking they always continue till he stops. Patient finds that stimulants afford no relief. In the intervals between the attacks patient is perfectly well, and he feels that if he could only remain absolutely quiet the whole day long he would be quite free from pain. Practically, as he is obliged to be out and about, he has several attacks, on an average six or eight every day. At the time of coming under observation the seizures were rapidly increasing both in frequency and severity. His family history was fairly good. His father died at the age of eighty-three, and hardly had a day's illness in his life. His mother died of phthisis, but only, patient says, through catching cold, hers not being a consumptive family. He lost two brothers—one at the age of eighteen from consumption, and the other in the tropics, cause unknown. He has two brothers and one sister living, all well. There is no family history of gout, asthma, fits, heart disease, or sudden death. He has four children, one of whom (a boy) is consumptive, and another (a girl) subject to facial neuralgia. Patient is a bailiff by occupation, and is a remarkably intelligent man. He is a cool, clear-headed fellow, but little prone to talk of his sufferings, although they are at times very severe. He has travelled much, and has lived in Egypt, Turkey, Italy, and Greece. For the last thirty years he has been accustomed to lead an active out-door life, seldom walking less than fifteen miles a day, often very fast. He has, he says, done a great deal of hard work in the way of pleasure. He usually smokes about two ounces of birds-eye in the week, and has done so for years. His health has always been remarkably good, and, with the exception of rheumatism ten or twelve years ago, and pleurisy seven years ago, he has never known what it is to be laid up. He has never suffered from gout. On a physical examination it is noticed that there is some fibroid degeneration of the arteries, and there is slight hypertrophy of the left ventricle. There are no signs of valvular disease, and there is nothing to indicate the existence of aneurism. The urine was free from albumen.

There could be no possibility of doubt respecting the diagnosis. It was a typical uncomplicated case of angina pectoris.

Patient was placed for a week on infusion of quassia, in order that he might be observed, and also to eliminate the effects of expectation. It need hardly be said that he derived no benefit from this treatment. He was then ordered drop-doses of the one per cent. nitro-glycerine solution in half an ounce of water three times a day. At the expiration of a week he reported that there had been a very great improvement. The attacks had been considerably reduced in frequency, and for two or three days he had had only one attack—in the morning after breakfast. The attacks, when they did occur, were much less severe. He found, too, that a dose of medicine taken during an attack would cut it short. He had tried it several times, and it had always succeeded. It would not act instantly, but still very quickly; so that the attacks were considerably shortened. He was thoroughly convinced that the medicine had done him good, and said he was better than he had been since first he had the attacks. It was found that the nitro-glycerine, even in this small dose, had produced its physiological action. Patient complained that for two or three days he had experienced a strange fulness in his head, with a sense of pulsation. The pulsation was felt chiefly in the temples, but also across the forehead. It caused him no positive inconvenience, and he evidently had no suspicion that it was due to the medicine. The dose was then increased to three minims, and patient found that this gave him more speedy relief. On two days during the week he had no seizure at all—a most unusual circumstance. Patient had adopted the plan of carrying his medicine with him in a phial, and taking a dose if an attack seized him in the street. It never failed to afford relief. The beating had increased considerably in intensity, and was described as being a "kind of a pulse." Patient had discovered the fact that it was produced by the medicine. It came on immediately after each dose, and lasted about a quarter of an hour. It was now experienced chiefly across the forehead. Patient continued steadily to improve, and the dose was gradually and cautiously increased. With the increase in dose the pulsation became more severe, lasting from twenty minutes to half an hour. When twelve minims were given every three hours it became a positive inconvenience.

On January 14th the dose of the nitro-glycerine solution was increased to fifteen minims every three hours. A few days later he had a "kind of a fit" immediately after having his medicine. The pulsation came on as usual, but was quickly followed by headache and pain at the back of the neck. His speech "began to go off," and he felt that he would have lost his senses had they not given him tea and brandy.

Patient took the fifteen-minim dose every three hours from the 14th to the 28th of January, but on the latter date had two "bad shocks." He took a dose of medicine in the morning as usual, and felt the customary pulsation, which passed off after about half an hour. An hour and a half later he experienced a sensation as if he would lose his senses. He did not fall, but had to catch hold of something to prevent himself from so doing. It did not last more than half a minute, and there was no pulsation with it. The other seizure occurred later in the day, and was of the same nature. Patient attributed these attacks to the medicine, and was in no way alarmed by them. He thought it advisable, however, to reduce the dose by a third, and henceforth had no return of the fits. At this time his anginal attacks were so thoroughly kept in check by the nitro-glycerine that they gave him comparatively little inconvenience. He always carried his bottle of medicine with him, and immediately on experiencing the slightest threatening of an attack he took a sip. Relief was certain, for even when it did not at once cut short the attack it eased the pain so considerably that he was able to go on walking. For two months longer he continued the ten-minim dose, sometimes taking a little more, and sometimes a little less. He preferred taking it occasionally, as he thought it might be necessary to take it regularly. For the last eight months he has taken nothing but cod-liver oil, and sometimes tonics, and has not had a single attack. He attends once or twice a month, but is perfectly well. He can walk and get about as well as ever he could.

(To be concluded.)

EPITHELIOMA IN KASHMIR.

BY THEODORE MAXWELL,
M.D. CAMB., B.SC. LOND., F.R.C.S. ED.

With Remarks by

A. PEARCE GOULD, M.S., F.R.C.S.,
ASSISTANT-SURGEON TO THE WESTMINSTER HOSPITAL.

HAVING been engaged during the summer seasons of 1874–5 in medical mission work in the valley of Kashmir, I was much struck, as my predecessor, Dr. Elmslie, had been, with the frequency of epithelioma, and the peculiar situations in which it occurs on the bodies of the natives. A short account of these singular growths, and the various points in which they resemble and differ from European epitheliomata, as well as of the cause from which they seem to arise, may perhaps be interesting.

To give an idea of the frequency of epithelioma in Kashmir, as compared with it in other parts of India and in Europe, I may say that in the Vienna Hospital, in 1873, of 22,049 patients, 86 were cases of epithelioma, or ·039 per cent.; in the Lahore Hospital, in 1873, of 22,123 patients, there were 11 cases of malignant tumours, or ·007 per cent.; whereas in the Kashmir Mission Dispensary, in 1874–5, of 3924 patients, there were 49 cases of epithelioma, or 1·24 per cent.—a proportion more than thirty times as great as in Vienna, and 117 times as great as in Lahore, where all malignant tumours are reckoned together.

In Europe, and I believe in India as well, the most common seats of epithelioma are the lip, tongue, mouth, scrotum, and penis. Thus, taking 220 cases from recent reports of various hospitals in London and the Imperial Hospital of

Vienna,—111, or more than 50 per cent., occurred on the face; 22, or nearly 23·2 per cent., on the tongue; 14, or 6·3 per cent., on the penis; 10, or 4·54 per cent., on the scrotum; but not one on the abdomen or thighs, though it is not unknown in these situations.

Now in Kashmir the great majority of the cases occur on the abdomen and thighs. Taking Dr. Elmslie's 20 recorded cases, and 34 of my own of which I have a record of situation, or 54 in all,—27, or 50 per cent., were on the abdomen; 15, or 27·7 per cent., on the thigh; 2, or 3·7 per cent., on the lower part of the leg; and one each on the lip, tongue, male mamma, forearm, elbow, finger, hand, scrotum, stump of foot after frost-bite, and sole of foot. In the abdominal cases the umbilicus is very rarely involved. I have never seen the penis affected. I should remark that the Kashmiris are mostly Mussulmans, and therefore circumcised.

The epitheliomas usually presented the appearances of irregular, nearly circular or oval ulcers, from the size of sixpence to that of a crown, with everted indurated edges, an irregular, coarsely-granular base, of a yellowish or brick-red colour, discharging a little purulent or sanguino-purulent fluid, which, on microscopic examination, was sometimes found to contain characteristic nests or globes of epithelial cells. By pressure or irritation the base could be made to bleed easily, but not profusely. The growth was invariably easily movable over the deeper parts, and was not very tender to the touch. The induration generally extended to about a quarter of an inch outside the edge, and the skin was usually of a dull purple hue up to this limit. The pain complained of varied greatly, in some cases being very slight, and in others severe, and was always described as "like the pricking of needles."

The growth of the tumours was certainly slow. I find that the average time they had been noticed before I saw them was about a year and a half. One thigh case, which was only about two inches in diameter, was said to have existed eight years, and I found when excising it that it had penetrated more deeply than any other, having involved the fascia lata and the adductor muscles.

As to the termination of cases not interfered with, I am unable to give any information, never having heard more than vague rumours of death having resulted from these tumours. The native hakíms do not attempt to cure them.

These growths are, to say the least, much less malignant than European epitheliomas. They have been excised by my predecessors in the medical mission, Dr. Elmslie and the Rev. W. T. Storrs, M.R.C.S., and myself from 1865 to 1875, and neither Mr. Storrs nor I ever saw a recurrence of either Dr. Elmslie's cases or of our own. In connexion with this it is interesting to note that the lymphatic glands are rarely affected. I never knew them cancerous, and very seldom enlarged. Mr. Storrs also tells me he never remembers seeing them even enlarged.

Age appears to have much the same influence as in Europe. I do not think I saw any in persons under thirty. The majority were certainly in those over forty. Dr. Elmslie, however, saw one in a child of three.

As in Europe, the male sex is affected much more commonly than the female. Lane[1] gives the ratio as 86 males to 19 females—that is, the male cases are 82 per cent. of the whole. From Dr. Elmslie's statistics and my own I find that in Kashmir the male cases were 85·2 per cent. of the whole.

As will be seen later on, the peculiar habit to which I believe the existence of Kashmiri epitheliomas is due is indulged in as much by women as by men, but still we have apparently almost exactly the same ratio between the susceptibility of the sexes to the disease that exists in Europe, where it is usually thought to be accounted for by the greater sources of irritation to which the male sex is liable, such as that of the short clay pipe on the lip, and the soot-impregnated trousers of chimney-sweeps on the scrotum.

I regret that I can give no information on the influence of heredity in Kashmiri epitheliomas.

The vale of Kashmir is just the place to form what Haviland denominates a "cancer field," being an alluvial plain drained by a considerable river—the Jhelum,—and with a damp relaxing climate. Haviland does not distinguish between the different forms of cancer, and I do not feel sure whether he means to include epithelioma or not. At all events, this is the only form which is at all common in Kashmir, and I am certain that its existence is in a very slight degree, if at all, attributable to climatic influences.

The Kashmiris are, physically speaking, a fine race. They live almost entirely on rice, but are capable of continued muscular exertion. Their habits are uncleanly, and they suffer from syphilis, scrofula, lupus, and chronic rheumatism. I have often seen leucodermic patches on the skin of the trunk and thighs; these patches were generally somewhat anæsthetic, but I never saw an epithelioma on or near one. Simple tumours are not specially common, and I do not remember ever to have seen a wart.

The coldness of the Kashmiri winter, and the want of a sufficiency of warm clothing, have led to the adoption of a curious habit by the natives. Every Kashmiri—man, woman, or child—carries about with him or her a kángri, or fire-pot. These kángris consist of clay pots, about four inches in diameter, encased in wickerwork, and with basket handles. They contain live charcoal or wood ashes, and are usually carried inside the nightgown-shaped garment, which both men and women wear, and are often in contact with the skin of the abdomen. When the wearer sits, or rather squats, he holds the kángri between the thighs and the abdomen, and perhaps blows up the charcoal through a slit in his garment. It not uncommonly happens that part of the wickerwork wears off the heated clay vessel, which, if carelessly held, may severely burn the skin of the abdomen or thigh. Here we have, I believe, a sufficient explanation of the frequency and peculiar situation of epithelioma in Kashmir. I found upon inquiry that very many of the sores had to the patient's knowledge originated in burns from the kángri. The abdomen of nearly every Kashmiri is mottled or seamed with the cicatrices of burns, or at least the marks of constant irritation by the heated surface of the kángri. It is interesting to remark the analogy between the heated clay-pipe causing epithelioma on the lip in Europe and the heated clay kángri causing the same disease on the abdomen of the Kashmiris. The thigh is less frequently burnt, partly because the kángri is only in contact with it when the wearer is in a squatting posture, partly probably because the pyjámas or drawers afford some protection to this region. As I have already stated, epithelioma is more common on the abdomen than the thigh, in the proportion of 27 to 15.

Woolwich.

[1] Cooper's Surgical Dictionary.

Remarks by Mr. A. PEARCE GOULD.—Dr. Maxwell has been kind enough to allow me to examine some of the tumours he removed in Kashmir. When I saw them, after several months' preservation in spirit, they appeared as ulcers with indurated, raised, everted edges, and granular hard bases; in no specimen that I saw was there any fungating mass or process springing from them. On section, the new growth, to the naked eye, extended to a distance of one-eighth to one-fourth of an inch. Owing to an unfortunate accident to the specimens, I have not been able to make as complete an examination as I hoped to have done; but I have examined several sections taken from the edge or base of the ulcers, and have found the appearances presented to be those characteristic of epithelioma. Masses of epithelial cells, containing in every case more or less well-formed and numerous "globes épidermiques," are seen extending into the tissues beneath, which are infiltrated with small round cells—leucocytes. The epidermic cells vary in size in different specimens; in some they are very large, but in most they are smaller than is common in epithelioma of the lip and penis.

One special interest attaching to these cases is their supposed cause. Epithelioma arising in connexion with the scar of a burn or scald is by no means unknown in this country. Mr. Hulke mentioned such a case at a recent discussion at the Pathological Society, and when I was surgical registrar at University College Hospital, there was under Mr. B. Hill's care a woman with a large epitheliomatous growth on the thigh in the site of a scar from a burn received many years before. Their great frequency in Kashmir appears to depend upon the fact that the scars, when healed, are being constantly scorched, if not actually burnt, by the "kángris." It is quite in accord with well-received doctrines to accept epithelioma as resulting from such conditions. But these cases have a higher interest and importance, and particularly at the present time, when the relation of rodent ulcer to epithelioma is under discussion; for they help to fill up the gap between the instances of these diseases commonly met with in this country. They differ from rodent

ulcers in their position, rough, readily bleeding surface, and everted raised edge. They resemble rodent ulcers in their slow growth, curability by complete and wide removal, and the non-infection of the lymphatics.

They differ from common epitheliomata in their position, small amount of new growth, and general benignity, but they distinctly resemble them in microscopical appearances, in most of the naked-eye characters of the sores, in arising from oft-repeated irritation, particularly at the line of union of dissimilar epithelial tissues, in the sex they most often affect, and the age at which they appear. It is well worthy of note that although both sexes are equally exposed to the alleged cause of these growths, the male sex is so much more frequently attacked than the female.

There are one or two points on which it will be interesting to get further information. Do these growths start at the edge of the scars, or do they arise in cicatrices in which there are no hair-follicles, no glands of any description? Is their growth more rapid, and are they at all apt to affect the lymphatic glands, when they spread from a dense scar with few lymph-channels to pliant softer skin with abundant lymphatics? Are the growths ever multiple? If Dr. Maxwell's explanation be the correct one, we should expect to see several primary growths where the abdomen is "seamed with cicatrices."

Gower-street.

LITHOTOMY, FOR REMOVAL OF A LARGE PHOSPHATIC CALCULUS,

THE NUCLEUS OF WHICH WAS A BONE PEN-HOLDER, WHICH HAD BEEN TWO YEARS IN THE BLADDER.

By JOHN LOWE, M.D.

A. B——, aged nineteen, a tall, well-built young man, was seen on Feb. 6th, 1878, in consultation with Mr. Love, who suspected the presence of stone in the bladder. It appeared that he had suffered on several occasions from "stoppage of water" more than two years ago. (His father and brother have also been subject to gravel.) In order to "relieve" himself, he had on several occasions passed into the urethra a bone pen-holder. The last time he used it, two years ago, it escaped from his grasp and passed into the bladder. He says that he experienced no inconvenience from its presence there until two or three months afterwards, when he was seized with pain in the loins, accompanied with bloody urine, violent straining with protrusion of the bowel, and incontinence of urine. These symptoms were relieved by treatment, and he continued fairly well for a year and a half, "with the exception of occasional pain." No mention was made of the foreign body until after my visit. About six weeks ago he had a return of suffering: great pain in passing water, which was loaded with ropy mucus; there was complete incontinence of urine, and the effort to micturate caused action of the bowels. At the time of my visit the chamber utensil was half filled with tenacious mucus.

On passing a sound, I immediately detected a large calculus. As the patient was becoming exhausted, it was clearly necessary to operate as early as possible.

A few days subsequently, assisted by Messrs. Love, Walford, and Newmarsh, I performed lateral lithotomy, the patient being under the influence of chloroform. A free external incision having been made, and the neck of the bladder incised, the pen-holder was felt lying behind the prostate gland. The finger was passed under it, but it was so firmly imbedded that it could not be raised until I had made a lateral incision through the gland, when it was readily brought into view and seized by the forceps. As the stone which surrounded it was large, attempts were made to dilate the orifice into the bladder before proceeding to extract; but the parts were so indurated and surrounded by effused lymph that very little dilatation could be effected, and it was found necessary to divide the prostate on the other side also. Even thus but little progress was made; but fortunately, after one or two attempts at extraction, the pen-holder was drawn through the stone, which was now easily grasped by the forceps, and steady attempts at extraction made. The separation of the handles of the forceps showed that the stone was between three and four inches in diameter, and the mark on the pen-holder confirmed this. While the process of dilating was going on the stone broke, and the pieces were then easily removed and the bladder well syringed. Very little blood was lost in the operation, and there was no subsequent oozing.

The patient passed a good night. He made an excellent recovery, and continues well to the present time. The pulse and temperature, when I saw him on the third day after the operation, were normal. On the sixth day urine passed by the urethra.

The pen-holder was of bone, and measured four inches in length.

King's Lynn, Norfolk.

A Mirror OF HOSPITAL PRACTICE,

BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

KING'S COLLEGE HOSPITAL.

LARGE TUMOUR OF THE THIGH; REMOVAL, WITH ANTISEPTIC PRECAUTIONS; RECOVERY.

(Under the care of Mr. HENRY SMITH.)

E. T——, aged forty, married, was admitted into Wigram ward on Sept. 16th, 1878, with a large tumour of the right thigh. The previous history and the family history were good. She had four healthy children. During her last pregnancy, five years ago, she noticed a small, ill-defined "lump" in the inner and upper part of the right popliteal space, elastic to the feel and movable. For four years the growth of the tumour was gradual and painless, but during the last twelve months it more than doubled in size. There was no history of injury to the limb. She had lost flesh.

On admission she was fairly nourished, but anæmic. There was a large tumour situated on the inner and posterior surface of the right thigh, extending downwards into the popliteal space, and upwards as far as the upper third of the thigh. The skin over the tumour was healthy, and not adherent. On putting the muscles into action, they could be seen to pass over the growth. The surface of the tumour was irregular and ill-defined, somewhat elastic and nodular. No fluctuation could be made out. The mass could be moved slightly laterally, but not up and down. It was painless on handling. Its attachment could not be made out, nor could the femoral vessels be detected. There was no bruit over the growth. The superficial veins were distended. The inguinal glands were not enlarged, and the movements of the knee-joint were unaffected. The patient could walk, suffering inconvenience only from the size of the tumour. The right thigh measured 19¾ in. round the tumour, being 6½ in. larger than the corresponding measurement of the other limb. The heart and lungs were healthy. The appetite was bad, and the bowels were irregular. Urine normal. Ordered twenty grains of tartrate of iron in water three times a day.

During her stay in the hospital, the general health improved, but the tumour increased about an inch in circumference.

On October 5th, the patient having been placed under the influence of an anæsthetic, an incision ten inches long, parallel to the saphena vein, was made through the skin down to the muscles. The muscles were then divided to a like extent, and the growth, which was encapsuled, exposed. After the first free incision, it was mainly removed by tearing it from the surrounding tissues, the point of the knife being only occasionally used to assist. A few bleeding points were ligatured, a drainage-tube with lateral openings was inserted, and the skin drawn together by numerous stitches. The dressings were then adjusted. The operation was performed antiseptically, with the strictest precautions. Great caution was necessary in manipulating the posterior and lower part of the growth, for the lower part of

the femoral and the popliteal vessels were found to be lying in close contact with the tumour, and after its removal they were seen lying completely exposed in the wound, and on examination a deep groove was observed on the surface of the tumour, in which the vessels had evidently lain. Night temperature 98·8°; pulse 88. Twenty drops of sedative solution of opium were given.

The patient passed a good night. Next morning the temperature was 99·6°; in the evening 98·8°, pulse 104. The wound was dressed; the discharge was free and sanious, but there was no fetor.

On Oct. 7th, the temperature was normal. The wound was again dressed; the discharge was serous and decreasing; the line of incision had united.

The progress of the patient to convalescence was uninterrupted. The wound was dressed at increasing intervals, being dressed in all six times; the temperature remained normal; the discharge gradually decreased, and remained without smell, the drainage-tube being from time to time shortened. The superficial stitches were removed on the fifth day.

On Oct. 30th the wound was entirely healed, and the dressings were left off. The patient got up. She was discharged cured on Nov. 8th.

Microscopical examination showed that the tumour was fatty, with myxomatous degeneration. In one part it presented an appearance very like sarcoma.

In remarking on this case, Mr. Henry Smith stated that it had caused great interest in so far as it was extremely difficult to decide before the operation as to the best course to pursue. The surgeon who had sent the patient to the hospital imagined that it would be needful to perform amputation through the thigh, and on the first examination it appeared very doubtful whether the growth could be safely removed without adopting this measure, for, in consequence of its deep situation and slight mobility, it was impossible to ascertain its attachments, and it was equally uncertain how far the main vessels of the region were involved in the growth. In fact, Mr. Smith was fully prepared to perform amputation had he found that removal of the tumour was impossible without serious injury to the important structures around. Happily, the growth, although so extensive, was limited and encapsuled, and the very free division of the muscles allowed of its removal with comparative ease and with little loss of blood. Mr. Smith stated that he had a very similar case in the same region some time since, and the operation in that instance was as easily accomplished, but the patient, a fine healthy man, succumbed two or three days after the operation, apparently from shock, although there was little bleeding. The value of the antiseptic treatment was seen here in the rapid healing of the wound without constitutional disturbance or suppuration.

MIDDLESEX HOSPITAL.

A SERIES OF CASES OF FRACTURE OF THE SKULL.

(Under the care of Mr. HULKE.)

IN the following case of fracture of the skull, in addition to high temperature (as in those reported at pages 50 and 119), there were certain peculiar gyratory movements of the left arm whenever it was touched. After death laceration of both temporo-sphenoidal lobes was found, with extensive extravasation.

CASE 4. *Fracture of skull, extending from vertex into middle fossa of base; extensive lacerations of br a; gyratory movements of arm; excessive high temperature.*—A big, muscular labourer, aged thirty, was found lying in his doorway insensible, and was taken to the hospital at 11.45 P.M., on Feb. 1st, 1873. He was perfectly insensible. Blood was oozing from the left ear. Just behind the vertex, and a little to the left of the middle line, was a scalp wound about one inch long. No fracture could be felt. He had passed a restless night. At noon next day his pulse was 92 proximate, and the temperature was 99·8° F. By the evening these had risen to, pulse 100, temperature 99·8°.

On the 3rd the deep insensibility continued. He moaned often. There was rigid spasm of the right arm, which was stiffly straightened parallel with the trunk, and closely applied to it, the thumb being lightly bent across the palm, and the fingers also flexed. The left forearm was slightly flexed, and both it and the arm were very rigid. The fingers and the thumb were flexed. When the left arm was touched it executed a rapid circular movement, obliquely across the trunk, like the movement of turning a crank. This movement was repeated some twenty times; it was at first slower, then quicker, at which culmination opisthotonos was superadded. It then became slower till it ceased, the limb remaining stiff and contracted, but quite still, until next touched, and the opisthotonos passing off. A very slight pressure, as in feeling the wrist-pulse, sufficed to provoke these circular movements. Morning temperature 100·8°, pulse 118; in the evening the temperature had risen to 104·5°, the pulse was 120, and the breathing 40 per minute.

On the 4th the spastic condition continued. The temperature steadily rose till, in the evening, it reached 108·7°. The readings throughout the day were as follows:—

	Temp.	Resp.	Pulse.
9 A.M.	103°	44	140
2 P.M.	103·6°	62	180
3.30 P.M.	104·8°		
5.30 P.M.	104·2°		
7.30 P.M.	105·1°		
9.30 P.M.	108·7°		

He died at 11 P.M.

Necropsy on the following day.—Starting from the wound at the vertex, which had not divided the pericranium, was an extensive radiating crack, which passed downwards through the left parietal and squamosal bones, and crossing the petrosal bone through the tympanum, ended at the foramen lacerum medium of that side. The dura mater at the fracture was not torn, but it was separated from the bone by a large firm clot of blood, which had evidently proceeded from branches of the middle meningeal artery. The upper and outer surface of the parietal and temporo-sphenoidal lobe of the left cerebral hemisphere, corresponding to the line of fracture, was extensively but superficially lacerated. Blood was extravasated here into the pia mater and under the arachnoid, and the convolutions were flattened by the pressure of the large extravasation between the dura mater and the bones. In the outer surface of the right temporo-sphenoidal lobe were similar lacerations, but they were deeper and more extensive than those in the corresponding left lobe. There was also more blood extravasated into the pia mater and under the arachnoid, and slight flattening of the cerebral convolutions. No lesions of the base of the brain or elsewhere than those mentioned were observed. There were no indications of inflammation of the membranes or brain.

LIVERPOOL WORKHOUSE HOSPITAL.

A CASE OF ŒSOPHAGOTOMY.

(Under the care of Mr. WILLIAM ALEXANDER.)

ABOUT three o'clock in the morning of the 3rd of last July, Nurse M——, aged thirty, was awakened by a fit of coughing, and with the sensation as if something were lodged in her throat. On digital examination she found that a broken piece of the vulcanite plate belonging to her artificial teeth had become entangled behind the glottis. In her attempts to get it out it disappeared, and when Dr. Irvine, who was sent for, arrived, it could not be felt. At noon of the same day she complained of a pricking pain in the course of the œsophagus, a little above the midpoint of the sternum, increased by the recumbent posture, and in that position, accompanied by an intolerable feeling of suffocation. All the instruments for the extraction of foreign bodies from the œsophagus were used, but without anything abnormal being detected. The long tube of the stomach-pump was gently passed into the stomach, and met with no obstacle. Once it was believed a slight vibration was communicated to the hand; but, as it did not occur again, it was supposed that the instrument had touched the teeth. The patient was ordered to take food as solid as possible, and expectant treatment was adopted.

The missing piece of vulcanite was described as a flat triangular bit half an inch long by a quarter broad, having a piece of silver wire a quarter of an inch long projecting from one end. Several dentists were consulted as to the solubility of the material of which these plates are made, but they said it was so insoluble that it would not be safe to attempt to remove it by means of solvent agents.

The pricking pain ceased in twenty-four hours, and was succeeded by a constant aching in the same spot. For the

first few days she swallowed nothing but fluids. On the sixth day she took some raw eggs, which produced considerable pain. At this date, and for the next two days, the expectoration of saliva became very profuse, so much so that a pint pot was filled in twelve hours. On July 9th some yellow matter, having a very unpleasant taste, came from the back of the throat, and eructations of a fetid gas annoyed the patient for some time. On the 17th she got up, and managed to eat some mashed potatoes with milk without much pain. She tried to eat a small piece of meat, not much larger than a pea. It remained at the seat of pain for about three hours, and then regurgitated into the mouth. On July 21st her voice began to fail, and by August 1st she could only speak in whispers. Œsophageal auscultation, as recommended by Dr. Clifford Allbutt, was had recourse to, but no indication was thus given of any obstruction to the passage of food. On August 14th the pain became much worse, and on the evening of the 15th it was so intolerable that the patient felt as if she was being slowly suffocated. The tube of the stomach-pump was again passed, and a distinct vibration was felt as it passed the painful spot.

The operation of œsophagotomy was performed in the usual way at noon of the 16th, the patient being under ether. Considerable embarrassment was occasioned by a profuse flow of venous blood when the superficial structures were cut through, and several veins required ligature before the hæmorrhage could be sufficiently restrained. The œsophagus was opened on a bougie introduced from the mouth. A pair of forceps was then passed down the gullet, through the wound, but nothing could be felt. The money-probang was then introduced, and drawn back along the posterior wall without result; it was then passed along the anterior wall, and on attempting to withdraw it it was held fast by something at a distance of between two and three inches below the sternal notch. The finger was then passed through the opening, and the plate was felt with the piece of wire fortunately turned towards the middle line of the œsophagus. It was easily removed with a pair of urethral forceps. The upper part of the wound was brought into apposition, but the lower part was left gaping, and was merely covered with a piece of lint dipped in carbolic oil. At 2.30 P.M. the patient had an enema of brandy and beef-tea. She swallowed a little iced water, which trickled through the wound. A subcutaneous morphia injection was given to allay pain. At ten o'clock at night the enema and morphia injection were repeated.

On Aug. 17th the temperature was 100°. The patient expressed herself as comfortable, but complained of thirst, to remedy which some dilute sulphuric acid with iced water was given. She had an enema of eggs and milk, which she retained. At noon she became restless, and the wound more painful. A morphia injection was given. Two other nutrient enemata were given during the day, and a morphia injection at bedtime. At midnight she had a little diarrhœa.

As the abstinence from food was probably producing the thirst and restlessness, she was allowed, at noon on the 18th, to swallow half an ounce of beef-tea, followed immediately after by an ounce of a mixture containing six grains of chlorate of potash, both of which were repeated every two hours. Most of the beef-tea came out through the wound, but only half of the mixture. The patient became more comfortable, and passed a good night. On the 19th she was bright and cheerful. The beef-tea still came through the wound, but not in such quantities. On the 20th the wound was rather painful. A poultice was applied outside the oiled lint. Temperature 100°. On the 22nd milk and eggs were taken alternately with the beef-tea. Chlorate of potash continued as before. On the 23rd nothing came through the wound. It was noticed that her voice was almost lost. Next day the patient was put on a generous diet. On the 27th she got up for a few hours. The voice was almost inaudible. On Sept. 10th she went into the country, with the wound almost healed.

On Oct. 10th the wound was healed. A little obstruction was felt when the food passed the seat of the operation. The tube of the stomach-pump was passed without meeting any obstacle or indicating any stricture. The voice was more audible. She said her hoarseness was intermittent, as on some days she could speak very distinctly, and on others scarcely at all; the states of the weather did not seem to affect it. The voice had become quite natural by Nov. 21st; there was no pain, no difficulty in swallowing, and the patient expressed herself perfectly well.

Remarks by Mr. ALEXANDER.—Œsophagotomy, though an established operation in surgery, is fortunately a sufficiently rare one to excite some interest. The mode of performing the operation seems to be quite settled, but the after-treatment is still rather undefined and variable. The treatment adopted in this case was alike simple and successful. It consisted in giving the œsophagus rest for forty-eight hours. To have refused food longer *per vias naturales* would probably have done more harm than good, as the thirst and the enemata were producing considerable irritability and depression. Then well-strained beef-tea, followed by the mixture, nourished the patient, relieved the thirst, and washed out the wound. The application of a poultice had the usual soothing effect that I have noticed in operations on the neck. Dr. M'Keown's case, reported in THE LANCET for June 8th, 1878, was treated similarly with a good result. The history of this case, I think, supports the statement by Arnott, Cock, Bryant, &c., that when a solid body such as this becomes fixed in the œsophagus, a speedy operation is the proper treatment. There are, however, some surgeons who hold that the retention of a foreign body in the œsophagus is not a very serious affair; that it generally becomes loosened by suppuration, and, being coated with mucus, is thus expelled. Even should it ulcerate through the œsophageal walls, and thus get into the chest, it is said to become encysted, and rarely produces fatal results. An important feature in this case was the difficulty in ascertaining the exact seat of the foreign body. The reason probably was that the plate lay flat against the œsophageal wall, its sharp corners slightly penetrating the mucous membrane, and the piece of wire, being smooth and covered with mucus, would thus give no indication of its presence. The constant pain at one spot, and the stoppage of food there, pointed to that as its probable seat, but the œsophagus was not opened until more positive evidence was obtained. The excessive venous hæmorrhage was probably due to congestion produced by ether as the anæsthetic, and in a similar operation chloroform would be preferable. The plate was evidently lodged just below the aortic arch, and the anatomical arrangement of that region sufficiently explains the irritation of the recurrent laryngeal nerve and the consequent hoarseness.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

A Study of the so-called Tendon-reflex Phenomena.

THE ordinary meeting of this Society was held on Jan. 28th, Dr. C. West in the chair. The evening was occupied by a paper by Dr. Gowers, dealing exhaustively with the subject of "tendon-reflex phenomena," as illustrated in the knee and ankle; some important deductions being made on the nature of these phenomena from a study of myographic tracings of the muscular contractions. The following is an abstract of the paper:—

"A Study of the so-called Tendon-Reflex Phenomena," by W. R. GOWERS, M.D. The paper records a series of observations on the two forms of muscular spasm commonly known under the above designation—that normally produced in the quadriceps extensor of the knee on striking the patellar tendon (knee-reflex), usually absent in locomotor ataxy, and excessive in lateral sclerosis of the cord; and that clonic movement which occurs at the ankle-joint on sudden dorsal flexion of the foot in lateral sclerosis of the cord (ankle-clonus). To ascertain the characters of the knee-reflex it was examined in 300 patients, of whom 150 were the subjects of simple epilepsy. Of the whole 300, it was absent on both sides in 18, of whom 5 were ataxics, 3 paraplegics without ataxy, 1 suffered from old hemiplegia, 1 from vertigo, 1 from tumor cerebri, 1 from old rickets, and the remaining 6 from epilepsy, 5 being girls. Two only of the 18 were good walkers. Of 27 hemiplegics the reflex was equal on the two sides in 13, excessive on the weaker side in 14. In 3 cases it was absent in one leg only, 2 presenting weakness of the leg in which it was present; in the third it

was absent in the leg in which the patella had been fractured and the two halves were separate. Of 100 epileptics with good walking power the movement of the foot in 90 was between one and three inches; it was absent in none, excessive in 6; the average was just two inches. Of 22 epileptics with bad walking power it was absent in 5 and excessive in 5. The reasons for regarding it as a spinal reflex are strong, especially its loss in spinal disease, its arrest by section of the crural nerve, its radiation to the other leg in animals, which the author has observed in several cases in man (and also a radiation to the back muscles), and, lastly, the graphic study of the movement. Tracings were shown, taken on a myograph-drum, the writing-pen being fixed to the foot. The effect of the tap and the muscular contraction were both marked, and were separated by an interval of ·09 to ·15 second, the common interval in health and disease being ·10 or ·11 second. This corresponds with the time necessary for a reflex action (conduction ·045 second, latent stimulation ·01 second, reflex process in cord ·05 second). Reasons are given for doubting the accuracy of the shorter interval obtained by Tschiriew with the foot fixed. The interval is sometimes occupied (in some cases the latter part only) by a slight rise, due to a muscular contraction, probably indicating a direct stimulation of the muscular fibres. As a spinal reflex the question of the origin of the afferent impulse in the tendon, or in the muscle, by sudden tension must be left open. Facts were mentioned pointing to the latter view. As a reflex it is arrested by damage to the posterior nerve-roots (as in locomotor ataxy), disease of the grey matter (as in muscular atrophy, involving the quadriceps, sometimes, as in a case related, slight only), or damage to anterior roots (as in old meningitis). It is also lost in advanced pseudo-hypertrophic paralysis. Its occasional persistence in locomotor ataxy is connected with slight damage to the posterior root-fibres, as shown by sensation being little or not affected, and commonly by the absence of lightning pains (Buzzard, Westphal). A case of mixed lateral and posterior sclerosis is related in which sensation was more affected, lightning pains greater, and knee-reflex lost in one leg, while in the other leg the knee-reflex was present, and sensation was less affected, and lightning pains slighter, though occurring. From forty tracings of the ankle-clonus the regularity and time of the movement have been ascertained. From five to seven contractions occur per second, the average being 6·1. During the intervals the relaxation of the muscle is incomplete, a certain residual contraction persisting. A similar clonus may often be obtained in the plantar adductor pollicis, of which tracings are shown, having nearly the time of the ankle-clonus, 6·1 per sec. A lateral ankle-clonus has been met with by the author in one case, and also a knee-clonus (in the quadriceps), having, however, a much slower time, 2·5 per second. In the ankle-clonus, does the stimulus act on the tendon or the muscle? It cannot be excited by any stimulus applied to the tendon which does not increase its tension, and, therefore, which does not act upon the muscle. A lateral tap on the tendon will not cause it if the tendon is carefully supported on the other side. The tendon is very sensitive to a pinch, but this causes quite a different effect. On the other hand, the initial contraction can be excited by tapping the muscle, which can affect the tendon very little. The question of its reflex nature is next considered. The author has found that in cases in which the ankle-clonus can be obtained, and in slighter cases of similar central disease in which it is not obtainable or has passed away, a tap on the anterior tibial muscles, during passive dorsal flexion, excites a contraction in the calf-muscles, which does not occur when the adjacent tibia is similarly tapped, and so cannot be the result of increased tension. This appears at first to be a true reflex, but on taking tracings the interval between the tap and the contraction is found to be only ·03—·04 sec., insufficient for the mere conduction to and from the cord, and less than half that necessary for a spinal reflex. The stimulation of the muscle must be direct by the vibration of the tap, which can, indeed, even in health, be felt by the hand placed on the calf. Other measurements show that in lateral sclerosis the interval between the tap on the Achilles tendon, and on the muscle, and the resulting contraction (during passive dorsal flexion), is ·025—·04 sec. and ·035—·04 sec. respectively, quite insufficient for a reflex. Therefore the stimulation of the muscle must be direct, not reflex, and therefore not from the tendon. But this does not exclude all reflex influence: the extreme irritability to local stimulation, excited by tension, may be reflex. Tension on muscular fibres causes an afferent impression (painful when long continued, considerable, or after cramp), and tracings of the clonus show that the irritability is not developed instantly on the tension first being put on, but gradually, after a period long enough for a reflex. If the tension is previously put on, the first contraction is as strong or stronger than the rest. Hence we understand why, though local, it occurs in spinal sclerosis. The reflex phenomena in these cases, on stimulating the skin or pinching the tendo Achillis, are next considered (flexor tonic spasm, exciting, and broken by, the ankle-clonus), and its relation to spinal epilepsy. The intervals between the contractions of the knee-clonus bear the same ratio to those of the ankle-clonus, as does the interval between the tap and the isolated contraction of the knee-reflex to the interval between the tap on the Achilles tendon and the calf contraction. Hence each contraction in the knee-clonus is probably reflex, excited by the sudden tension on the muscle from the effect of the preceding contraction. In the calf and great toe muscles the sequence of tension and contraction occurs at each step in walking, and a physiological reflex between the two is probably developed in the act of learning to walk. The author has never seen the ankle-clonus in spastic paraplegia in a child who has not walked. A reflex relation between tension and contraction probably plays an important part in the co-ordination of often-repeated movements, and its loss may be part of the pathological state in locomotor ataxy, in which the allied knee-reflex is also lost. The ataxic and the child learning to walk may thus be similar in this condition as in appearance. If this view of the ankle-clonus be correct it should be a normal phenomenon, excessive in disease. Four tracings of the ankle-clonus are shown from four healthy individuals, having the same uniformity and time (5 to 7 per sec. average 6 sec.) as in disease. They were taken in the sitting posture, knee flexed and foot resting by the ball on the ground, when the ankle-clonus may be set up voluntarily, and will go on independently. The author, in conclusion, points out the analogy of the theory of a continuous stimulation from centre and periphery, leading to rhythmical action, with the discovery of Romanes regarding the rhythmical action in the medusæ.

The PRESIDENT, in commending the minute and careful observations made by the author of the paper, suggested that their description would have been more readily followed were the facts up to which they led stated at the outset.—Dr. BUZZARD said the subject was of extreme practical interest. As regards the patellar-tendon reflex, the tendency of the investigation went to show that the absence of the phenomenon was a peculiarly early sign of locomotor ataxy. Romberg's test of the difficulty the patient has in standing with the eyes closed, although valuable, did not suffice for early diagnosis, for in many cases of posterior sclerosis in the early stage ataxia is not present, the only symptoms being some trouble of cerebral nerves, and the presence of characteristic pains in the limbs. At such a stage, the absence of patellar tendon-reflex was likely to prove most valuable. Westphal has the merit of first drawing attention to this test, and Dr. Buzzard had never found it fail in any typical cases of locomotor ataxy, where the "lightning pains" were present. Hence he was disposed to think that some connexion would be found to exist between the absence of the patellar tendon-reflex and the existence of these pains. Many cases of "simple optic atrophy" were found, on inquiry, to occur in persons who were the subject of these pains, and who eventually became ataxic. If in such cases there was also absence of the tendon-reflex, the diagnosis of incipient ataxy might be made with certainty. Speaking of the "foot-clonus," Dr. Buzzard said that if it were thoroughly determined that its existence was evidence of organic disease of the spinal cord, there would be no other means of distinguishing between such grave disorder and mere functional derangement, as of hysteria. He believed this was the first time that the graphic method had been applied to the study of these muscular spasms, and he was struck by the excellent manner in which, by this means, Dr. Gowers had been enabled to shew the differences existing between the ankle-clonus and the knee-clonus, and the reasons he had deduced in favour of the former being due to direct stimulation of the intramuscular nerves. Dr. Buzzard had never found the patellar tendon-reflex excited by a direct blow upon the muscle (the vastus internus), the effect of such a blow being to produce a slow upward movement of the foot from the contraction induced by the direct stimulation of the muscular fibres, and

was entirely different from the contraction produced in the patellar tendon-reflex. He felt much indebted to Dr. Gowers for his admirable and exhaustive contribution to the subject.—Dr. ANDREW inquired as to the prognostic value of the absence of patellar tendon-reflex, together with the presence of lightning pains, for there was a patient under his observation who had suffered from these pains for thirty-four or thirty-five years, and in whom there was also absence of the tendon-reflex phenomenon. Yet he was perfectly free from any ataxic symptoms.—Dr. GOWERS, in reply, said that the significance of the absence of knee-reflex was entirely diagnostic and not prognostic. The case cited by Dr. Andrew was probably one of locomotor ataxy arrested in the early or incipient stage. Between that condition and loss of co-ordinating power coming on in a few months from the onset, there was every gradation. It was quite possible that the other symptoms of ataxy might never become developed. Almost all the evidence so far collected went to show an association between the lightning pains and the absence of knee-reflex; and, like Dr. Buzzard, he had never seen a case of locomotor ataxy where the knee-reflex was present with the lightning pains. But in such cases there was also absence of affection of sensation, showing that the posterior nerve-roots were not damaged. At the same time he expected that some day a case of locomotor ataxy would be met with in which both the knee-reflex and the pains would be present; but it would be the exception which proves the rule. In one case recorded in the paper, in one leg there was persistent knee-reflex with slight lightning pains, and in the other absence of the reflex with marked pains. A blow on muscular fibres might be followed by slight contraction excited by the tension produced; and he could understand this being more pronounced in some cases of locomotor ataxy. In other cases, where the knee-reflex is excessive, a blow on the muscle above will excite as great a jerk of the foot as a blow on the patellar tendon—a jerk of some three inches in extent; and in such cases it must be believed that the afferent impulse occurs in the part struck.

The Society then adjourned.

CLINICAL SOCIETY OF LONDON.

President's Address.—Pleuritic Effusion treated by Capillary Drainage.—Disease of the Spinal Accessory Nerve.

AT the meeting of the Society on Jan. 24th Dr. Greenhow, F.R.S., took the chair as President, and delivered an address, in which he reviewed the past work of the Society, and indicated some ways in which the Society might increase its sphere of usefulness. Dr. Southey read a case of pleuritic effusion which had been treated by drainage with the fine tube on the same principle as that adopted for the relief of anasarca. The patient was shown at the last meeting, and from the discussion that ensued it was evident that opinion was not much in favour of the method proposed as a substitute for paracentesis by the aspirator. Nor did the condition of the patient confute this opinion. Dr. Althaus read a paper on disease of the spinal accessory nerve, more familiarly known under the term "spasmodic torticollis."

Cases were shown to the meeting; but, in accordance with the recent regulation, they will not be read until taken in due order. Drs. Barlow and Lees showed two children suffering from paralysis of the serratus magnus muscle due to infantile paralysis; and Mr. G. Brown brought forward a man with undescended testicle.

ADDRESS.

GENTLEMEN,—On taking the President's chair for the first time, I beg to thank you most heartily for the great honour you have conferred upon me, an honour which is much enhanced, in my estimation, by the circumstance that it is bestowed by my professional brethren, and that it is held in connexion with a Society founded for the special purpose of advancing that branch of medical science upon the study of which my lifelong thoughts and energies have been centred. When, indeed, I was nominated by the Council for the office of President, I felt much diffidence as to the propriety of accepting their flattering proposal, for I thought it quite probable that some other member might, perhaps, occupy the chair more advantageously for the objects of the Society. Looking at the ability of your former Presidents, and the admirable manner in which each of them has performed his duty, I feel that I have a difficult task before me; but I shall use my best efforts to promote the objects and prosperity of the Society, and I trust that I may be able, at the close of my period of office, to transmit it to my successor with prestige undiminished and dignity unimpaired. In this effort, I well know that I shall be ably and cheerfully assisted by the executive officers of the Society, and I also feel assured that I may count upon your individual and collective support.

It has been customary for the President to address some preliminary words to the Society at the first meeting after his election. I feel that on the subject of clinical study I can add nothing to the wise and thoughtful words you have already heard from my predecessors, neither can I pretend to the eloquence which some of them displayed; therefore, during the short time for which I shall occupy your attention to-day, I propose to take a humbler, though, I trust, not an altogether unprofitable, theme.

The Clinical Society has now entered on its twelfth session, and it appears to me a suitable occasion for inquiring into the nature and character of the work which it has done, and of ascertaining how far it has fulfilled the intentions with which it was founded. From such a retrospect of its past labours we may perhaps form some forecast of the direction which its future efforts should take. That the Society has, in some senses, been eminently prosperous you are well aware. The report of the Council, read at the annual meeting a fortnight ago, was in this respect quite satisfactory; it showed how largely our numbers have grown, while the increasing interest manifested in our meetings indicates that the work done is generally approved. It is not, therefore, from any doubt or suspicion of failure that I propose this inquiry, but rather in the hope that we shall thereby be encouraged to make still greater efforts in future.

The Society was founded professedly for the cultivation and promotion of practical medicine and surgery, by the collection of cases of interest, especially of such as bear upon unsettled questions in pathology and therapeutics. The field of its prospective labours was therefore a very wide one, for I suppose the time will never arrive when there will cease to remain such questions as yet unresolved; but it could not well have been more restricted, for a field that did not comprise the whole extent of clinical research would scarcely have justified the formation of such a society. Our rules lay down more definitely the mode in which the main purpose of the Society is to be carried out. Communications of two classes are to be received. Those of the first class are to consist of written reports of cases already complete: written, in order that they may be accurate and definite; drawn up after a certain plan, in order that they may comprise every important particular. Communications of the second class are to consist of cases still under observation, and this class of papers was mainly designed to afford an opportunity for appointing a small committee of members to assist in drawing up a full record of the case. It is further provided that every communication shall conclude with explanatory remarks by the author; it being presumed that he is the most competent person to afford an explanation of the nature of the case he has observed, and of its bearings either upon pathology or treatment, and to draw from it whatever lessons it is capable of affording. The history of the case is thus kept, as much as possible, separate from the opinions and conclusions deduced from its study. The facts accurately related would thus, it might be hoped, constitute a record valuable for future reference, even though the inferences drawn from them, at the time of their occurrence, should subsequently be set aside. It is obvious, from these regulations, that the founders of the Society had not only a definite idea of what it was to aim at doing, but also took considerable pains to secure the accuracy and completeness of the work to be performed. For more efficiently carrying into effect the object of the Society, it was resolved, at an early meeting of the Council, that the President shall have authority to nominate, from time to time, committees consisting of not fewer than three members of the Society, for the purpose of carrying out the investigation of clinical and especially therapeutical questions.

[Dr. Greenhow then reviewed the work of the Society, concluding as follows.]

And now, gentlemen, what encouragement can we derive, or what suggestions may we gather, from this very imperfect sketch of our past labours to guide our future course? The Society has done good and valuable work. It has given facilities for bringing prominently forward many questions that might otherwise have failed to obtain such wide diffusion. It has been most useful in affording an opportunity for the interchange of opinion, and the free discussion of questions of practical interest; and we must all, I think, feel that these discussions have led us to listen with respect to, and to consider with care, the opinions of others, even though we ourselves may have differed from them. For my own part I can honestly say that I have rarely heard a paper read, or listened to a debate, without deriving from it some valuable information, or some useful practical hint.

But although we have thus good reason to be satisfied with the past, we cannot regard our work as having been altogether perfect. There is still room for improvement, and it would be well for each of us, when drawing up cases to be presented to the Society, to remember the regulations laid down in our laws, and to cast them strictly in the shape therein provided. As regards communications upon cases still under observation, probably my reference to the subject will serve to remind us that whenever it seems desirable the Society will be ready to associate a committee to assist in investigating an unusual case, or to verify uncommon facts. It appears to me, however, that our chief development might advantageously take the direction of making original investigations by means of committees. We have already done so to a limited extent, but such work might with great advantage be increased. Subjects of scientific importance, or of great practical interest, could undoubtedly be satisfactorily inquired into by us. Any report, emanating from a select committee of this Society, would be received with respect, and would unquestionably carry great weight with the profession at large. I may mention, as an illustration, one such subject that occurs to me, which it might have been advisable to refer to such a committee for investigation, some time since, when we had an animated debate upon the use of salicin and its congeners in rheumatic fever. A committee appointed at that time for the purpose of investigating the effects of salicin and its compounds might have aided in placing it in its proper position as a remedy for acute rheumatism. Having by your favour held an important position on the Council since the formation of the Society, I feel myself largely to blame for having allowed so good an opportunity of usefulness to pass by unimproved. We have all probably now formed our own opinions as to the value of salicin from personal experience, for it has, I believe, been largely tried in all the London hospitals, and it is therefore perhaps no longer necessary or desirable to institute an investigation which might have been useful and appropriate at an earlier period; but similar opportunities are certain to arise, and I trust that we shall use them, and so assist the advancement of our art.

In the early days of the Society, when its position was less assured than at present, and its pecuniary resources were small, it was necessary to husband our funds so as to provide for carrying on the operations of the Society for a year or two, even though we should on some occasions expend more than the income of the year. This state of things no longer exists. We have accumulated a small capital, and for several years, though our expenditure has been liberal as regards the cost of the annual volume of Transactions, our income has exceeded our requirements. It might now, therefore, be a proper question for the consideration of the Council, whether committees, consisting of not less than three persons, selected from among some of our able and energetic younger members, might not be appointed from time to time to undertake the practical investigation of important subjects bearing especially upon therapeutics or etiology, receiving from the Society a moderate honorarium for their services. I merely venture to offer this suggestion for consideration "without prejudice," as the lawyers express it.

If the Society continues as it has begun, and especially if it aims at doing higher and more complete work, its volumes of Transactions will in the future, even more than in the past, constitute a rich storehouse of information, gathered together, I trust, for the legitimate objects of the art of medicine—namely, "the glory of God and the relief of man's estate."

At the conclusion of the President's address a vote of thanks was moved by Dr. Southey and seconded by Mr. Langton, coupled with the request that he would allow his address to be printed in the Transactions.

Dr. SOUTHEY read notes of a case of Pleuritic Effusion in which the left thorax was drained by a fine cannula and capillary tube. The patient, a carman, aged twenty-three, of average build, height, and weight, was admitted into St. Bartholomew's Hospital with the ordinary symptoms of pleurisy with effusion upon the left side, of about nine days' duration. He kept to his work until the day before admission to the hospital, and walked upstairs to his ward. On admission his temperature was 103·2°, respiration 24, and pulse 80. Cough was slight. There was absolute dulness over the left lung in front and laterally, and posteriorly as high as the root of the lung; general absence of respiratory sounds on the left side, and increased breathing of the right lung. The patient was ordered an effervescing draught of tartrate of soda, with ten grains of nitrate of potash and ten minims of tincture of digitalis, every four hours; and a draught containing one-sixth of a grain of morphia at bedtime, if required for sleeplessness or pain. On the second day after admission the feverish symptoms were scarcely changed, the nights were restless, there was frequent cough, and the urine barely averaged twenty ounces per diem. The dulness over the left lung extended higher up posteriorly. On the following day one of Dr. Southey's fine cannulas was introduced into the left pleural cavity in the fifth intercostal space in the mid-axillary perpendicular. Clear serous fluid escaped, and was conducted by a capillary drainage-tube into a jar beneath the bed. The lad fainted directly the tube was introduced. It remained *in situ* for twenty-eight hours, hurting a little, and was then removed. Four pints of pleuritic fluid, sp. gr. 1020, were drained away. The left side was then dull on percussion; a loud friction-rub was audible in front and behind, and bronchial breathing in front, at the side, and behind. There was thus abundant sign of lung expansion. On the night after the operation, the lad had a morphia draught, and slept well, and in the first twenty-four hours passed two pints and a half of urine, of sp. gr. 1019. The next day the same quantity passed, and on the following day as much as five pints and three-quarters, of sp. gr. 1022. The daily quantity of urine during the next ten days varied from forty-five to seventy-five ounces. The saline mixture, with digitalis, was continued, and full diet, with four ounces of wine, were given. The temperature gradually fell, until it reached the normal range on the fourteenth day after the operation, when the respiratory sounds of the affected lung were all still improving. He left the hospital on the thirty-second day after operation. The left shoulder was then slightly dropped. The percussion-note was good at the apex, the front as low as the fifth rib, the axilla, and to the angle of the scapula behind. There was dulness over a hand's breadth at the base of the lung laterally, and behind. A rough, leathery, friction-sound was audible in the left suprascapular, intrascapular, axillary, lateral, and inframammary regions. The cardiac sounds were normal. Dr. Southey remarked that not a tinge of blood came at any time through the cannula, that the side had not been emptied but simply relieved, and that the renal secretion immediately was more than doubled. He had now tapped the chest five times in this manner, once drawing off nearly twenty ounces of purulent fluid, without any complication or accident, and he commended the proceeding for adoption in the hydrothorax of scarlatinal dropsy, as well as in any pleuritic effusion when the temperature remained high and the urine became progressively scantier day by day. Dr. Southey exhibited the last and best form of his fine drainage trocar and cannula, suitable for paracentesis abdominis or thoracis, or the draining of anasarcous legs. The trocar would adapt itself to different lengths of cannula by means of a crochet-needle screw-holder. The instrument would hold two sets or sizes of trocars and cannulæ. A fixed shield was adapted to it, and held the cannula *in situ* when it was used through the abdominal or thoracic walls. He had used the instrument in twenty or thirty cases of paracentesis abdominis without any untoward result.—Dr. BURNEY YEO asked whether by this procedure there was not some risk of establishing a fistulous opening in the chest-wall from the long retention of the cannula. The patient exhibited such a fistula when shown at the last meeting. Then was there any relation between the excessive secretion of urine and the removal of the pleural effusion in this particular case, for it was usually said that when any fluid

remains in the pleural sac it is got rid of by increase in flow of urine. Perhaps this patient ingested more fluid.—Dr. C. T. WILLIAMS asked whether drugs were withheld after the operation. If not, they probably acted more powerfully when the fluid had been removed. He inquired whether any peculiarities in the auscultatory signs were developed after the withdrawal of the fluid.—Dr. DOUGLAS POWELL presumed that Dr. Southey did not mean to advise the use of this instrument for drawing off purulent effusions. Nor was he himself quite convinced of their value in drawing off simple effusions, for the procedure effected in twenty-four hours that which could as safely be obtained in a very short space of time. He suggested that the increased flow of urine was due to emotional causes, for the boy fainted during the operation.—The PRESIDENT did not think it unusual to get friction-sounds appearing after paracentesis. He had often observed this, but Dr. Southey seemed to regard their appearance in this case as remarkable.—Mr. HUTCHINSON asked for more details as to drug-treatment. At the present day it seemed as if surgeons were coming to rely more upon drugs, and physicians to resort to operative measures. For himself, although formerly strongly advocating paracentesis in pleural effusions, he was coming more and more to rely upon drug-treatment for their absorption.—Mr. PARKER could scarcely regard the method as one accompanied by a "minimum of discomfort" to the patient, for, with a fine trocar and aspirator bottle, the same result could be as safely attained in a few minutes instead of several hours. He had never seen a child faint when paracentesis was performed.—Dr. SOUTHEY, in reply, said that adults, especially if emotional, were more prone to faint than children. The tube was kept in for twenty-eight hours; for twenty-four hours fluid continued to escape. Before the tube was removed friction was heard in its neighbourhood, and the fact of the friction being audible in front and also behind showed that complete expansion of the upper lobe of the lung had taken place. In using the aspirator some blood almost always flowed towards the end of the operation, and this he looked on as detrimental, for the escaped blood might become the starting-point of a purulent transformation. The digitalis mixture was continued during the whole time. He would not use the tube for purulent collections, although in one case pus flowed freely through it. He admitted that in the present case some fluid continued to ooze from a small fistulous passage left at the seat of puncture.

Dr. ALTHAUS read notes of a case of "Disease of the Spinal Accessory Nerve." The patient was a married lady aged fifty-three, in whom spasm of the sterno-cleido-mastoid and trapezius muscles of the left side had come on, apparently in consequence of mental anxiety. The spasm was incessant, the patient being unable to keep the head steady for a single instant. The head was chiefly pulled to the side and backwards, while the top of the shoulder was raised, and the shoulder-blade approached the spine; but there was also nodding of the head, the ear being approached to the collar-bone, the occiput depressed, and the chin raised and directed to the opposite side. Muscular rest was only obtained during sleep, but the jactitation commenced again on waking in the morning. The patient was, in consequence of this, utterly disabled from following her usual occupation, and the general health suffered; but there was no trace of any other disease. The treatment consisted in the application of the voltaic current to the suffering nerve, the internal use of bromide of potassium, cannabis indica, and belladonna, subcutaneous injection of arsenic and morphia, and external use of chloroform liniment; but this treatment remained ineffectual, although some temporary relief was afforded. Dr. Althaus did not think there was any structural disease, but that the change in the nervous matter was molecular. In other cases which had come under his notice the result of the treatment had also been unfavourable, but seeing that good results have followed the operation of nerve-stretching in other spasmodic affections, he suggested stretching of the spinal accessory nerve for any obstinate case in which the patient might be determined to seek relief.—Dr. ALLEN STURGE could recall five similar cases: one was associated with all the symptoms of disseminated sclerosis, justifying the belief that the torticollis was due to a patch of sclerosis at the nucleus of the spinal accessory. The patient was a female, and had clonic torticollis of the right side. Another case, a female thirty-two years of age, of neurotic tendency, developed clonic torticollis after recovering from an attack of melancholia. The spasm was increased whenever she was out of health. In two other cases, one of a female about fifty years of age, and the other a male, between forty and fifty, the torticollis was associated with spasmodic movements of the arm. None of the cases were much benefited by treatment.—Dr. TAYLOR, in a case under his care last year, with unilateral torticollis, had applied the continuous current to the muscles, and in addition prescribed bromide of potassium for a considerable time. After two or three months of this treatment the patient was considerably better. When last seen the patient, who had since passed from notice, complained much of stiffness of the neck. Dr. Poore, in his work on Electricity, records a case which he believes was cured by galvanism.—Dr. MAHOMED said there was a case in Guy's Hospital under the care of Dr. Wilks, in which the platysma was affected so that on the least excitement the mouth is agitated. The continuous current gave some relief.—Mr. M. BAKER had one such case under his care, equally uncontrolled by treatment to those related by Drs. Althaus and Sturge. He had intended to divide the spinal accessory nerve, but the patient left the hospital. He was sorry to hear Dr. Althaus say that this method had met with so little success.—Mr. PARKER said that in one case Mr. Rivington excised a portion of the spinal accessory nerve, but the movements continued. The patient unfortunately died from septicæmia. He examined the excised portion of nerve microscopically, and thought there was an increased amount of vascular connective tissue in its substance.—Dr. ALTHAUS, in reply, said there was no implication of the platysma in his cases. The possibility of sclerosis was certainly to be entertained. In all other cases he had never seen any extension of the disease, such as might be expected if spinal sclerosis were in question. Most probably it was only in younger subjects that improvement followed treatment.

Reviews and Notices of Books.

A Handbook of Therapeutics. By SYDNEY RINGER, M.D. Seventh Edition. London: H. K. Lewis. 1879.

THE present edition of Dr. Sydney Ringer's now well-known work contains additional chapters on the Tongue, the Pulse, the Skin, and the Temperature, with the indications they afford for treatment. A chapter is also added on Nitro-glycerine. With the exception of the last, not one of them has been introduced into the general or into the otherwise excellent analytical index. In regard to the tongue, points that might have been noticed in regard to it with advantage are the intumescence of the tongue, observed in various diseases, and the modes of protrusion and withdrawal of the tongue, which are often sufficiently characteristic of the general state of the patient. The chapter on the skin is good as far as it goes, but somewhat too compressed. A page and a half is not sufficient space for all that might be instructively mentioned in regard to the relations of the skin to disease. The chapters on the pulse and on the temperature are all that can be desired. The fact that Dr. Ringer's book has passed through seven editions speaks for itself. We know no work on therapeutics which gives a more connected and intelligibly written account of the several drugs and groups of therapeutic agents than this, and it will be found a very useful companion to the Pharmacopœia.

A Glossary of Biological, Anatomical, and Physiological Terms. By THOMAS DUNMAN. London: Griffiths and Farran. 1879.

THIS little book would have been better if it had been made more complete. A glossary of this kind is much wanted, and if the author had taken a little more time and been able to consult more numerous works of reference, he might have made a really valuable contribution to literature. As it is, we do not know on what principle the words he gives have been selected. Many we should have expected to find

are absent, whilst the explanations of others are, to say the least, extremely short.

Thus amongst botanical terms we fail to find Anatropal, Amphitropal, Amentum, Arillus, Androgynous, Pyxis, Basidiosporis, Paraphysis, Firmororis, and Pentameroris, and many others. Why should Bulbus be in and not Corne? In anatomy, why is the Calloso-marginal Sulcus inserted, and not the far more important Fissure of Rolando? Why is Redia omitted, and Eupnœa, and Achromatopsia, and Visual Purple, and Sphenotuform, and the Os Transversum, and a host of other terms at least as important as the Adductor tertii secundi digiti of Hylobalis? Post-frontal is in, why not Post-temporal? Kreatin is in, why not Kreatinine? "Brownian movement" might have been introduced. Peristome is given in relation to Vorticella and Crustacea, but is much more frequently used by the botanists in relation to mosses. Nevertheless, with all its shortcomings, it will, we doubt not, prove useful to the general reader. The definitions are, as far as we have noticed, accurate.

The Art of Scientific Discovery, or the General Conditions of Methods of Research in Physics and Chemistry. By G. GORE, LL.D., F.R.S. London: Longmans and Co. 1878.

DR. GORE, himself a distinguished and successful scientific discoverer, has attempted in the work before us to guide others in the path of discovery. We cannot think that he has to any great extent succeeded, although he has certainly produced a learned and interesting book. A large portion of it consists of logical dissertations culled from such well-known writers as Whewell, Thomson, Herschell, and Jevons, on various well-worn topics, such as Ideas, the Use of the Reasoning Power, and the like. We do not find any novelty in matter or treatment in all this, and think the greater part might with advantage have been excised or much curtailed. Another large and even less useful portion of the book is occupied with generalities, which are often mere trivialities. It is surely unnecessary to argue at great length that diligence, enthusiasm, and manipulative skill are required for scientific work, or that previous scientific knowledge is desirable. Yet these and similar matters fill three-quarters of the book, and it is, indeed, not until we come to the last two parts, on actual working in original scientific research and on special methods of discovery, that we find anything of real practical use. Amidst so much commonplace, there is some really useful matter, and the book is amusing reading from the great number of scientific stories and quotations which it contains.

HEALTH OF LARGE ENGLISH TOWNS IN THE FOURTH WEEK OF 1879.

DURING the week ending last Saturday, 5272 births and 3717 deaths were registered in twenty of the largest English towns. The births exceeded by 90, and the deaths by 347, the average weekly numbers during 1878; the deaths, however, showed a decline of 262 from the high number returned in the previous week. The annual death-rate in the twenty towns, which had been equal to 27·1 and 28·1 in the two preceding weeks, declined last week to 26·3. During the first four weeks of the current quarter the death-rate in these towns has averaged 27·7, against 22·3 and 25·6 in the corresponding periods of 1877 and 1878. The January mortality in these towns has been higher this year than it has been since 1875, when it was equal to 30·1 per 1000. The death-rate last week in the several towns did not exceed 20·3, 20·4, and 20·9, in Nottingham, Plymouth, and Bristol, whereas it ranged upwards to 31·4 in Liverpool, 31·4 in Sunderland, 31·7 in Salford, and 33·6 in Manchester. The high death-rates in Sunderland and Salford were mainly due to excessive zymotic fatality, while in Manchester and Liverpool a large proportion of the excess appears to have been caused by the exceptional fatality of diseases of the respiratory organs. The deaths referred to the seven principal zymotic diseases in the twenty towns were 444 last week, against 433 and 397 in the two previous weeks; they included 148 from whooping-cough, 139 from scarlet fever, and 55 from fever, each of these numbers showing an increase. The annual death-rate from these diseases, averaged 3·1 per 1000 in the twenty towns, and ranged upwards to 6·1 and 10·0 in Oldham and Salford. Scarlet fever, measles, and whooping-cough showed fatal prevalence in Salford; scarlet fever, whooping-cough, and enteric fever in Oldham. The fatality of scarlet fever was also excessive in Newcastle-upon-Tyne, Sunderland, and Bradford. Whooping-cough was proportionately most fatal in Manchester, Leeds, and Hull. Small-pox caused 24 more deaths in London, whereas no fatal case was recorded in any of the nineteen large provincial towns.

New Inventions.

GROUT'S PATENT INVALID'S FOOD-WARMER.

WE have had brought under our notice an apparatus specially constructed for use in the sick chamber. It is a metal chest, of oblong shape, with a hinged lid, and contains two porcelain jars, each of a capacity of one pint. Two kinds of food may be kept warm for twelve hours or more without any fear of savouring of each other. The size of the

warmer is 12+8+8 inches. As it obviates the necessity of constantly warming food over fires &c. in a sick room, it deserves a trial by the profession and heads of families. A smaller apparatus is made to contain one jar. The agents are Messrs. Savory and Moore, New Bond-street.

INVALID KETTLE.

MESSRS. J. ALLEN AND SONS have adapted a tube to an ordinary kettle, which answers the purpose of use for hot water in the sick room, and also projects the steam into the atmosphere of the apartment. The article is well constructed, strong, and cheap.

The same firm have a chamber utensil of iron, lined with either tin or enamel, which promises to be very durable.

THE LANCET.

LONDON: SATURDAY, FEBRUARY 1, 1879.

AN important issue has been raised and, for a time it must be assumed, determined, by the recent proceedings of the Medical Officer of Health of the City of London in the matter of what was alleged to be flour adulterated with plaster-of-Paris. Finding a parcel of flour in the market, apparently containing a large proportion of sulphate of lime, and hearing that it was to be sold as food, Dr. SEDGWICK SAUNDERS deemed it officially incumbent upon him to analyse a sample. The tests proved it to be adulterated to a considerable extent. He therefore took legal advice and applied to the Lord Mayor—not, be it observed, to order its destruction, but to condemn it as unfit for food; the legal presumption being that the onus of showing it was intended for use in some other way would rest on the owners. The Lord Mayor, taking his stand upon the strict letter of the law, and seemingly more intent on displaying his acumen as a justice than his sagacity as a magistrate, rejected the application. The Commissioners of Sewers—that strange body to which is delegated the care of the health of the City—at first appeared disposed to support their medical officer; but, having submitted a case for counsel's opinion, they find that in the absence of distinct proof of actual, or contemplated, sale of this flour or plaster-of-Paris—whichever it be—as *food*, it must be regarded as an article not designed to be eaten; in short, adulterated plaster-of-Paris, and not flour—and therefore one which cannot be legally "condemned." It is not for us to traverse the opinion of counsel, although, were we to do so, we could argue that it would be difficult to prove that anything found in the public market was intended for food, and the office of medical officer of health might, for all the service it is likely to render, be abolished forthwith. Meanwhile we will select a more practical line of argument, and ask how, unless the medical officer is to be a lawyer as well as an analyst, and so combine the functions of both crafts in his public person, he is to discharge his duty to the community?

Dr. SEDGWICK SAUNDERS acted with prudence in not asking the Lord Mayor to condemn the dead pony recently found skinned and in a basket at a sausage-maker's shop in the Meat Market. There was no proof that it was intended for human food, and if there had been, horseflesh may be as good here as across "the silver streak," which spares us so many worse inflictions. This particular pony was, it seems, destined for the knacker's—at least it was sent there after the medical officer moved in the matter. The owner had skinned the animal for the sake of the hide or to save the knacker trouble. When next a few baskets of half-putrid fish are found, who shall say that the article is not intended for use as manure or for some manufacturing purpose? It may be contended that the presence of decomposition must be taken as evidence of an evil destiny. Not at all; decomposition is a very good thing in its proper place, and answers a useful purpose in certain processes of manufacture. If decomposed fish is to be regarded as an unmistakably bad commodity, why not flour adulterated with plaster-of-Paris? It so happens, although counsel may not be aware of the fact, that sulphate of lime or plaster-of-Paris is one of the extraneous substances with which flour used to be commonly adulterated until the labours of the very class of officials upon whom it is thought desirable to heap contempt put an end to the practice. Now, when there seems reason to believe that there is a growing tendency to take advantage of the laxity of the law against adulteration, and of those very numerous modes of evading it which judicial wisdom has suggested, medical officers and analysts are to be hampered in the discharge of their duty, first, by the figment that if the purchaser is not prejudiced, the sale of an adulterated article is not an offence, and then by the requirement that not only shall the medical officer show that a commodity is unfit for food, but he must further prove that it was intended for use as food! Surely this is throwing obstacles in the path of duty and digging pitfalls to the peril of public health. Nothing can be easier than to throw the onus of showing that any commodity which resembles an adulterated article is not intended for food on the owner. The exposure of such mixtures in a public market, or their open sale, except in packages which could not be mistaken for parcels of eatables, might be interdicted. It would be no great hardship, for example, to enact that plaster-of-Paris should not be sent out precisely as flour.

It is high time the whole subject of adulteration came again under legislative consideration. The last year has been prolific of difficulties and embarrassments, created, it would almost appear, for the benefit of unscrupulous tradesmen. Trade is undoubtedly in a bad plight, but not in so desperate an extremity that the ingenuity of judges, counsel, and magistrates, needs to be taxed for the discovery of new ways of escaping the penalty of practices injurious to the public health. There can be no reasonable question as to the effect of recent proceedings in this matter. It has been demonstrated, for the benefit of all who may be disposed to take advantage of the discovery, that the selling of an adulterated article is no offence in law unless some one is cheated; so that on the whole a trade in adulterated goods, if judiciously conducted, is not perilous. Any risk which the tradesman may run by having adulterated goods on his premises can be avoided by simply leaving the inspector to prove that they were intended for sale. After the experience gained by the medical officer of the City of London, we venture to think gentlemen holding similar positions will not be eager to draw an inference prejudicial to the interests of the salesman, from the mere fact of obviously impure goods being found on his premises. It will always be remembered that flour, largely adulterated with plaster-of-Paris, may be intended for use as plaster, and we are not aware of any law to prevent a baker from selling the last-mentioned article side by side with his bread, after the manner of the huckster of former days. If a general revival of the practices which THE LANCET Commission of 1852 did so much to extinguish is to be prevented, the rights and interests of common sense will need to be defended against the encroachments of legal fiction and

forensic casuistry. This is a matter in which the medical profession must take a very lively interest. It is one of the first conditions of health that the food of the people should be pure. Turning to an old volume of PEREIRA, even now no mean authority on the subject of adulteration, and the text-book of practitioners twenty years ago, we find at the top of the list of articles "which have been used to adulterate wheat-flour, *chiefly* chalk and sulphate of lime (plaster-of-Paris)." The object of adulterating plaster-of-Paris with flour is not so obvious! That would be like depreciating the value of the silver coinage by gold. It must henceforth be clearly understood by medical officers of health and analysts that the mere presence of a foreign substance in any article usually employed for food, particularly if the adulterating agent be found in large proportion, is not evidence that the commodity should be condemned, but rather that it is intended for some purpose other than use as food. For example, butter much adulterated may be looked upon as intended as grease for cart wheels; milk containing a quantity of extraneous matter will be destined for cleaning kid gloves; while flour mixed with considerable quantities of sulphate of lime is to be used as plaster; and if loaves are found actually baked with foreign ingredients, these will probably be specially prepared and on sale for the cleansing of wall-papers, or some equally useful and innocent purpose. In short, it is idle to seek to apply the law as it stands to practical sanitary purposes. The only rational aim will henceforth be to procure a revision of the Statute-book in the interests of public safety and, as we have said, common sense. To this end, we venture to think, medical officers of health should straightway address themselves; and if public opinion is really alive to the importance of the question raised by this strange difference between Dr. SEDGWICK SAUNDERS and the Lord Mayor, the movement will not be without success.

ON another page we give a translation of the first detailed official medical report on the fatal disease in the province of Astrakhan which appears to have been made public by the Russian Government. The reporter, Dr. DÖPPNER, the principal medical officer of the Cossack troops in the province referred to, is the sole survivor of the medical staff—eight in number—which endeavoured to combat the disease in question at the outset. His report explains much of the doubt which has hitherto rested upon the nature of the malady; but although he hesitates to express a positive opinion as to its special character, his description leaves little doubt that the disease which has scared Russia and Central Europe is true plague. We learn from the report how the earlier manifestations of pestilence were masked, so to speak, by a prevalence of local malarious fevers; and we can understand how Dr. DÖPPNER, when confronted, doubtless for the first time in his life, with the pestilence which had so long vanished from Europe, hesitated to admit the fact, and to take the responsibility of the conclusion which must inevitably have been forced upon his attention.

The publication at this moment of Mr. NETTEN RADCLIFFE'S third memorandum on the recent progress of plague, in the Report of the Medical Officer of the Local Government Board for 1877, is of peculiar interest with reference to this reappearance of plague in Europe. In this memorandum and previous memoranda the history of the modern development of plague is so given that we are enabled to follow the progress of the disease from year to year and from place to place to the frontier of Transcaucasia and to the inlet to Russia, by way of the Caspian Sea, at Astrakhan. Throughout the year 1877 and part of 1878 plague was rife in the parts of Persia on the southern shores of the Caspian; and Mr. RADCLIFFE makes a significant reference to probable plague on the Caspian shore of Transcaucasia, at Baku, in 1877. It is with reference rather to the mode of spread and development of recent appearances of plague, and to the symptoms of the disease as observed in them, that the memoranda have especial value at the present moment; and they furnish abundant data on these subjects. Contrasting the accounts given of recent outbreaks of plague in Mesopotamia and Persia with the account now given of the outbreak in Astrakhan, we observe at once the close similarity of the phenomena, while at the same time we notice several differences. The similarity is marked as to the comparatively slight diffusiveness of the disease, except to persons in very intimate communication with the sick; but in the pulmonary complication and excessive mortality the Astrakhan outbreak seems to be exceptional. Therapeutically, it is to be feared that Dr. DÖPPNER'S experience is not singular; but, hygienically, the several outbreaks of plague which have occurred since 1873 yield precious instruction.

First of all they confirm, as it seems to us, in the clearest way, the conclusion, usually accepted in this country, of the utter inutility of quarantine, land or sea, as ordinarily understood and practised, against the spread of plague; and, next, they furnish the strongest grounds for the belief that the measures which are found efficacious in the suppression and extinction of typhus will be found equally efficacious in the suppression and extinction of plague. Even admitting that certain measures of restriction, after the manner of quarantine, may be admissible in districts where a semi-barbarism still exists, and where local sanitary organisation and administration is rudimentary, it is not without shame that we contemplate the official representatives of the medical profession of Russia, of Germany, and of Austro-Hungary, concurring in the adoption of measures of land and sea quarantine, for which nothing can be advanced in support except tradition. We cannot suppose that the official information as to the recent plague, of which Mr. NETTEN RADCLIFFE has become the reporter in this country, can be restricted to the British Government; yet, on the other hand, it is difficult to understand, in face of recent experiences of the disease, under what circumstances the Governments of Russia, Germany, and Austro-Hungary can have committed themselves to the quarantine follies reported during the past three or four days. Let us hope that our own Government will escape similar follies. Should plague extend westwards, and reach these shores, we may expect some local panics, unless the Government has the foresight to anticipate them by taking such measures as will give the public confidence in our present sanitary organisation and mode of administration, which we believe

will, if duly exercised, prove amply sufficient for our protection against any serious invasion of the disease.

To the "Statement by Members of the Board of Examiners of Candidates for the Army Medical Department," which has been laid before Parliament on the motion of Dr. LYON PLAYFAIR, Colonel STANLEY has added "Remarks by the War Office Committee" on the statement. As we have already discussed at some length the letter of the examiners, it appears unnecessary again to go over all the ground, and we shall therefore content ourselves with briefly noticing the chief points in the reply of the Committee. The Committee object to the inference drawn by the examiners from the comparison of the *average* proportion of candidates to vacancies during the five years preceding 1873, and the five years following. This mode of statement makes it appear as if a sudden decrease had taken place at that date, while the Committee state "that the fall was progressive, and that it becomes year by year more difficult to obtain candidates." There can be no doubt that the popularity of the Department had been gradually diminishing from the period when the provisions of Lord HERBERT'S Warrant began to be modified and contracted by confidential memoranda from the Horse Guards, and War Office Circulars, until the beginning of 1873, when the number of candidates did not equal that of the vacancies. The inference of the examiners, however, that this falling off was the result of the Warrant of 1873, can scarcely be accepted, because the entrant examination for that year had taken place before the promulgation of the Warrant. That the Warrant tended to increase the unpopularity of the service we are quite prepared to admit, but it was only one of many causes, and we fail to see that its existence has any bearing on the question of the deterrent effects of the entrant examination. The Committee admit the greater popularity of the Indian Medical Service, and the consequent adequate supply of candidates for it, but as they despair of being able to "level up" to its attractions, they have proposed such measures as in their opinion may induce a sufficient number of candidates to come forward for the Army Medical Department.

The next point to which the Committee object is the depreciation by the examiners of the value of the evidence adduced to prove that the half-yearly examination acts as a deterrent. This evidence consisted of the opinions expressed by two universities, the Catholic University of Dublin and the Edinburgh University; by three London hospitals, St. Bartholomew's, St. Thomas's, and Westminster; and by four members of the profession. The reasons, if they can be justly so called, advanced by the examiners to set aside these opinions amount to nothing more than that they were mere expressions of opinion, and, being opposed to those of the four examiners, ought not to be regarded! But surely the opinion of the teachers of five important medical schools as to the influence upon their pupils of certain examinations ought to carry considerable weight; and as the four gentlemen have at least this in their favour, that they can have no personal interest in the retention or abolition of the examination, we see no reason why their opinion should not be set against that of the four examiners. The Committee admit the advantage of a "competitive entrance examination," but insist upon the importance of it being really competitive, which, they maintain, it is not at present. We have always held that, however useful it may be for the selection of candidates when the number exceeds the vacancies, it ought not to be required when that is not the case. The double qualification should be a sufficient guarantee of fitness for admission, and the medical school at Netley should be utilised for testing the qualities of the men so admitted. The opportunities of judging the men during their four months' course, and the high qualities of the professors under whom they work at Netley, ought to be a sufficient guarantee that any of them who are physically, educationally, or morally unfitted for the service, would be found out and relegated to civil life. We observe that the Committee express the intention of still adhering to the system of competitive examination for one-half of the vacancies; we presume they mean only when the candidates are sufficiently numerous to require it for the purpose of selection. One-half of the vacancies are to be filled up on the recommendation of the various medical schools, but we are still without any information of the way in which this double-portal system is to be worked. We foresee many difficulties in it; but there is always one way of getting out of them—by throwing open the service to all men possessing the double qualification and producing satisfactory testimonials of character, subject to the condition of their final appointment being dependent upon the report of the Netley professors. But whether the entrant examination is to be continued or not, without reference to its competitive character, we trust the Secretary of State will no longer delay bringing out the Warrant to regulate the new conditions of service, but will enable intending candidates to come forward in time to join the next course at Netley, which, we believe, will commence in the beginning of April.

THE last Report on the Health of the Navy (a brief summary of which has already appeared in THE LANCET) contains some important statistics on the working of the Contagious Diseases Acts. A short Parliamentary paper has also appeared which attempts to controvert a statement made in writing by the Rev. Mr. GRANT, Vicar of Portsmouth, who has recently, in an official form, avowed his belief that these Acts have greatly benefited the sanitary status of his own town. Again, "Seven Reasons for the Repeal of the Contagious Diseases (Women) Acts (1866-69)" have been lately issued in the form of a pamphlet by the City of London Committee for obtaining the repeal of these Acts. (This last-named pamphlet may be bought for 2*d.*, and is prefaced by an extensive quotation from Archdeacon PALEY'S "Moral Philosophy," which appears to us to plead as much against the argument of the repealers as in its favour). Meanwhile we recur to this unsavoury subject once again for the purpose of pointing out to our readers and the public that, as Canon MILLER remarked the other day at a meeting of the Hospital Sunday Fund Council, if anything could be more fallacious than figures it was facts; and so the so-called facts as to the amount of disease at ports under the Acts are shown in the Health of the Navy Reports, compiled by Dr. SLOGGETT, to be altogether incorrect and untrustworthy. In these Reports appears a careful analysis of statistics which, according to Dr. SLOGGETT, show that

more than half the cases of primary syphilis at the home stations were (during the period comprehended in the Report) contracted at places *not* under the Acts, as well as more than a third of the cases of gonorrhœa. These cases came into the protected ports, and are, of course, scored up to them, and, as far as the enemies of the Acts are concerned, against them. The facts are (and in this case we do not think them fallacious) that seamen come from all parts of the United Kingdom to the principal protected ports, and men paid off get leave for at least six or eight weeks, which is spent at various places in which the disease is contracted. Short terms of leave, varying from forty-eight to ninety-six hours, are also given to well-conducted men on full-pay, and these men have, of course, abundant opportunities of going to London, or to many places out of the protected districts. This is specially the case as regards Sheerness and Chatham, from which ports men can without any difficulty come to the metropolis, if only for one night, and return to the ship in the Medway infected with a life-long foul disease. Dr. NEVINS accuses the official returns of wilful inaccuracies and misstatements, and instances the case of H.M.S. *Caledonia*, which ship in 1870 spent two days at Naples and 180 days at Malta. But, curiously enough, we are asked to take this as an example of the futility of protection under such circumstances; Malta, as we all know, being a stringently protected port, and Naples subjected to no sanitary jurisdiction whatever. Is it possible to rely upon the *facts* stated when such as these are produced to support the arguments and theories?

It is much to be regretted that the Army Medical Department do not publish a vigorous and exhaustive statement year by year as to their official experiences in connexion with the Contagious Diseases Acts. A table similar to that published in the Navy Reports could be easily compiled by them, as they have all the necessary data at Whitehall, and most careful deductions could with very little trouble be drawn therefrom. But even up to the present time, when the quarterly returns are compiled, all cases admitted in the list are included, as if contracted in the place from which the report is dated. A correspondent of this journal recollects, on a certain occasion, that of thirteen cases of primary syphilis that occurred in a regiment at Sheerness, eleven had actually come into barracks infected with the disease, which had been contracted in London. It is also perfectly well known to the Windsor police force that the soldiers of the Household Brigade quartered there go to the metropolis very frequently, contract the disease there, and as a result swell the returns of a protected district, and so give it, as with many others, a glaringly unfair aspect.

It is considered advisable again to refer to this subject thus early in the year, because, whether legislative action be undertaken on the question or not, it is but right that the public should know how far figures and facts influence this very important question. The medical profession, as a body, with a minute minority of exceptions, thinks that it has just and good grounds for believing in the success of these Acts, and hence for insisting, reasonably, but very emphatically, on their continuance, and, if possible and practicable, on their extension. Such being the case, we cannot but look upon this special appendix to the Health of the Navy Reports as a step in the right direction, and entertain a hope that it will be repeated until the object indicated is fully realised.

THE litigation in the Hampstead Hospital case has reached a further stage, though, no doubt, not a final one, by the judgment of Mr. Baron POLLOCK. It will be remembered that in the trial of Sir ROWLAND HILL and Others *v.* the Metropolitan Asylums Board, the jury found for the plaintiffs, on the several questions left to them by the learned Judge, who took time to consider his judgment. The jury found that the hospital was a nuisance *per se*, and by the coming to and going from the hospital of the patients; that the defendants had not erected and carried on the hospital with proper care, and with due reference to the plaintiffs' rights; and that in some other particulars they had failed of their duty. The learned Judge concurred in the view, that although the defendants might have acted under the powers conferred upon them, those powers would not absolve them from the obligation of so erecting and conducting the hospital as not to interfere with the legal rights of the plaintiff. "If," he said, "the defendants could at any place, and in any manner, carry out the requirements of the Act without creating a nuisance, it cannot be supposed that the Legislature armed them with an option so to perform their duty as to create or not to create a nuisance respecting the rights of others, as it might seem to the defendants or to the Local Government Board fitting and proper with reference to the internal advantage or economy of the asylum." In other words, they would not be allowed to ignore all existing rights, especially as no compensation for possible injury was provided for by the statute. Judgment was therefore given for the plaintiffs, with costs; and an injunction granted to restrain the defendants from carrying on the asylum so as to be a nuisance to the plaintiffs, the issue of the injunction being suspended for three months with liberty to either side to apply. There can be no doubt that the Board will resist the injunction by all the means in their power. Whether they will ultimately succeed depends upon a variety of contingencies which it is impossible to foresee. The effect of the injunction would be most serious if there should be any considerable spread of small-pox or other epidemic disease. Yet we cannot but hold that the judgment is sound, and it is very greatly to be regretted that the Board did not by timely concession prevent so serious an issue. There is ample evidence that they might at one time have done so, and thus not only have prevented the lawsuit, but, what is of even greater importance, checked an agitation which is in the main groundless, and, as it affects other hospitals, may lead to great embarrassment of a most important work.

A MEDICAL PRACTITIONER in the vicinity of Leeds has been fined for neglecting to give to a private patient a certificate of successful vaccination as the law directs. The omission, no doubt, happened from the gentleman being imperfectly acquainted with the law; but the local vaccination authority thought proper to prosecute, as their officer had had trouble on several previous occasions in obtaining certificates from medical men. The stipendiary magistrate inflicted a fine of five shillings, with costs.

Annotations.

"Ne quid nimis."

"TENDON-REFLEX."

THE interesting phenomenon of so-called "tendon-reflex," which has been prominently brought forward in this country by Dr. Buzzard, has received further elucidation in a paper communicated by Dr. Gowers to the last meeting of the Royal Medical and Chirurgical Society. He has applied the graphic method to the investigation of the phenomena with remarkable success. The "knee-reflex," otherwise known as the "patellar tendon-reflex," is that form of muscular spasm excited in the quadriceps extensor femoris by striking the tendon of that muscle forcibly, when, with the thigh supported, the knee is flexed at a right angle, and the foot allowed to hang free. The myographic tracings show that on an average 1-10th of a second elapsed between the exciting tap and the contraction of the muscle; and Dr. Gowers pointed out that the time in question corresponded precisely to that estimated by physiologists as the minimum time for the conduction and the spinal reflex action to take place; and when to this is added the fact of the absence of the reaction in lesion of the spinal cord, and the results obtained by experiments on animals, the view that it is a truly *spinal* reflex action is fully sustained. Whether the afferent impulse is originated in the tendon or in the muscle, owing to the latter being suddenly made tense, is not yet proved. The absence of this "tendon-reflex" is much dwelt on as a diagnostic sign in locomotor ataxy. Still the reaction may be present in an ataxic, but in such case it will be found, as the investigations of Dr. Buzzard, confirmed by those of Dr. Gowers, go to show, that evidence of involvement of the posterior nerve-roots in the sclerotic change will be but slight or wanting; that, in other words, the lightning pains and diminution of sensibility in the limb will not be present. If the view taken as to its nature be correct, it is plain that the absence of knee-reflex may occur in any diseased condition of the nerves or spinal cord in direct relation with the muscle—that is, in the path of the reflex impulse; and it is accordingly absent in disease of the grey matter and of the anterior nerve-roots; but an examination of three hundred patients shows that it is often absent when locomotor ataxy cannot be suspected.

The knee-reflex, absent usually in posterior spinal sclerosis, is excessive in lateral sclerosis, and it is in the latter disease that what is termed "ankle-clonus" has been chiefly observed. This is the clonic movement occurring at the ankle-joint on sudden dorsal flexion of the foot in that disease, but producible in health. Its nature is not quite the same as that of the knee-reflex. Dr. Gowers maintains that it is not altogether a true spinal reflex action as that is. The myographic tracings showed clearly that the time elapsing between stimulation and the spasm which initiates the clonus (1-35th to 1-20th of a second) was much too brief to allow of the spinal reflex action to take place. But—and this is one of the most important issues of the research—it would seem that tension of the muscle increases its irritability to local stimulation, not directly upon the tension being applied, but after an interval long enough for a reflex act to occur. We have here, then, this important fact, that muscular tension and muscular contraction are probably closely related—that the one excites the other. One physiological application of this was pointed out by Dr. Gowers—viz., the alternating tension and contraction of the calf and great-toe muscles in the act of walking. He had never met with the ankle-clonus in spastic paraplegia in an infant who had not learnt to walk—a point strongly bearing out the truth of the hypothesis, for in such a child the channel for this reflex action would not have been opened up. The whole subject of co-ordinated muscular movements must be read again in the light afforded by such researches, and it was suggested that the absence of the reflex from tension to tonic or incipient contraction may be one element in the pathology of locomotor ataxy. Among the more important incidental points of Dr. Gowers' paper is the fact that in pathological states, during passive dorsal flexion of the foot, a tap on the muscles in front of the leg causes a contraction of the calf muscles, and that this is a more delicate test of the pathological condition than the ankle-clonus itself. This would seem a very important addition to our means of diagnosis. Another interesting observation is the occurrence of a similar clonus in the toe and lateral muscles of the leg, and the demonstration that the true knee-clonus has a very different time from the ankle and toe movements, which seems conclusive proof of its different origin. The fact that the ankle-clonus of health has exactly the same time as that of disease brings the latter under the range of normal phenomena excessive in, but not confined to, pathological states. The conclusion regarding mechanism seems to prove that the term "tendon-reflex" is only partially accurate as regards the knee-reflex, and is wholly inaccurate as regards the ankle-clonus, which has nothing at all to do with the Achilles tendon.

CYPRUS.

OUR correspondent writes from Cyprus last week:—"The long-looked-for rain has fallen at last, storms with a heavy downpour having been of almost daily occurrence; the weather has become much colder, and even ice has been observed at Nikosia and Mathiati. The annual rainfall is so small—averaging in a term of years only twelve inches, and falling with a certain regularity in certain months, of which November and December are notably wet ones,—that its absence for nearly the whole of this period was beginning to create amongst the natives an alarm of drought, a word pregnant to them of famine and disease. However, the timely showers of the last few days have relieved the Cyprian mind, and agricultural works are in full swing. With the cold weather our fever cases have almost disappeared. The 1st battalion of the 20th Regiment remain in excellent health, and the sick-lists of the other troops—chiefly Royal Engineers—are quite small."

We are glad to hear from Halifax that the health of the 101st Fusiliers, which regiment was so "fever-stricken" at Cyprus as to render their removal imperative, has very greatly improved under the influence of the bracing climate of Nova Scotia. They are reported to be a fine, well-set-up body of men, and are becoming very popular in the garrison.

THE ADMINISTRATION OF THE HOSPITAL SUNDAY FUND.

WE are somewhat surprised that so little notice has been taken by our daily and other contemporaries of a very important, if, so to speak, "side" subject that cropped up at the last meeting of the Council of the Hospital Sunday Fund, held at the Mansion House on January 20th. A motion was brought forward by Dr. Glover, seconded by Sir Rutherford Alcock, and supported by Sir Edmund Currie and many others, indicating in effect that the Council should be furnished by the Distribution Committee with the information upon which, in each and every case, they gave the respective awards. According to the argument put forward by Dr. Glover and his supporters, the Council are now, as it were, working in the dark, being responsible to the public for the distribution of the moneys sent to them, but being entirely ignorant as to the particulars upon which the awards are made. The Council, in fact, wants more light in order to be more intelligent. Its members are accused

of secrecy and "unintelligibleness" in the administration of the affairs of the Fund, and that, of course, is a charge that should not be made, or, if made, should be answered quickly and completely. It is not wise, in such matters, to make mountains out of molehills; but if the Council, as it appears, really constitute the pivot of the wheels upon which run the Hospital Sunday Fund, they should not be placed in the position indicated by Dr. Glover. In order to anticipate objections, it may be argued that, if the information is to be furnished fairly and fully, what is the use of the Distribution Committee, inasmuch as the latter are simply an instalment of the Council. The obvious reply, of course, is that a small number do work of this kind better than a large number of men, and are at the same time sufficiently representative. One thing, however, is tolerably certain. If the Council become as much master of the situation as the supporters of the motion desire, the next step will be to give the acquired particulars to the public; and, indeed, this is the inevitable sequel. We have no reason, however, to suppose that any serious opposition would be raised on the part of the hospital authorities, and, anyhow, complete openness in the matter must be advantageous to all who either subscribe to or participate directly in the institutions for the benefit of which the Hospital Sunday Fund was created and continues to be administered.

DR. PAVY'S NEW METHOD OF VOLUMETRIC ESTIMATION OF SUGAR.

IN employing the ordinary method of determining quantitatively the amount of sugar present in a liquid, difficulty is experienced by the turbidity caused from the precipitation and diffusion through the fluid of the reduced suboxide of copper preventing the precise point of decoloration from being readily perceived. To obviate this Dr. Pavy suggested some time back (Proceedings of Royal Society, June, 1877) that the precipitated suboxide should be collected and dissolved, and the copper subsequently thrown down by the agency of galvanic action upon a platinum cylinder. This process has been found to admit of great precision, but it requires both time and labour to be expended on it, so that a more ready plan was still a desideratum. This Dr. Pavy, in a paper read before the Royal Society on January 16th, has succeeded in devising. Observing that with an absolutely pure solution of sugar no amount of potash will hinder the instantaneous precipitation of the suboxide, but with commercial grape-sugar, and more especially with honey, interference with precipitation was temporarily excited, he was led to conclude that the interference was due to the action of the potash producing ammonia from the small quantity of nitrogenous organic matter incidentally present. It is a well-known fact that ammonia is a powerful solvent of suboxide of copper, producing a perfectly colourless liquid, which, however, quickly becomes blue from the reconversion of the cuprous into cupric oxide from absorption of oxygen. Now, if ammonia is added to the ordinary Fehling's solution as the saccharine product is dropped into it, the blue colour fades, till a colourless, limpid liquid is the result, without the occurrence of that precipitation which renders the precise amount of decoloration so difficult to detect when the process is conducted in the usual manner. The ammonia, however, does not interfere with the process of reduction. In order to prevent the reduced oxide being reconverted into the oxide by exposure to the air, Dr. Pavy suggests the employment of a flask, instead of an open capsule. The delivery tube of a Mohr's burette, for dropping in the product to be examined, passes through a cork which is made to fit tightly into the neck of a flask of about 80 cc. capacity. Through this cork also passes an exit tube for the escape of air and steam, to which may be attached a U tube filled with fragments of pumice stone moistened with weak acid to absorb the fumes of ammonia. The flask and its contents are heated by means of a spirit-lamp, and the best position for observing the disappearance of colour is by the light reflected from a white background, such as a sheet of paper placed behind the apparatus. In order to bring the ammoniated copper liquid to the same standard sugar value as Fehling's solution, the proportion of copper has to be increased, so as to give six atoms as against five. This Dr. Pavy effects by mixing 300 cc. of strong ammonia (sp. gr. ·880) with 120 cc. of Fehling's solution, and making up to a litre with distilled water. Twenty cubic centimetres of this "ammoniated copper solution" corresponds with ·010 gramme of sugar. The test acts with equal efficiency either in the presence or absence of extraneous organic matter. In addition to the advantage gained by diminishing the liability to error by readily recognising the exact point of decoloration, the ammoniated copper solution possesses a self-preservative power, and keeps unchanged for a considerable time, which is not the case with Fehling's solution without the addition of the ammonia.

COLLEGIATE EXAMINATIONS.

THE Council of the Royal College of Surgeons, as we announced on Dec. 14th, has found it necessary to strengthen the hands of the Court and Board of Examiners by confirming the resolution that a candidate for the diploma of member of the College referred upon his primary or anatomical and physiological examination, who shall not obtain more than half of the total minimum number of marks, shall not be re-admitted to examination until six months shall have elapsed (instead of three, as heretofore), and shall then be required to produce, in conformity with the standing rule, a certificate of the performance of dissections during not less than three months since the date of his reference. As showing the importance of this resolution, and the necessity for its adoption, the following analysis of the primary or anatomical and physiological examination just concluded will be read with interest by metropolitan and provincial teachers, many of whom attend the meetings as visitors. There were 149 candidates—viz., 118 from metropolitan, 21 from provincial, and 10 from both schools combined, and no less than 81 of these students had previously presented themselves once, twice, or thrice. On the present occasion there were 41 rejections—viz., 23 for the first time, 13 for the second time, 2 for the third, and 3 for the fourth time. These frequent rejections are attended with great pecuniary loss to the College, notwithstanding that the rejected candidates have to pay an additional fee of five guineas after the second rejection. So impressed is the General Medical Council with these frequent rejections, not only at the College of Surgeons, but elsewhere, that they have recommended the authorities to suggest to the unsuccessful men to attempt some other profession.

LONDON MORTALITY AND THE RECENT LOW TEMPERATURE.

THE Registrar-General, in his last weekly return, draws a comparison between the rates of mortality that prevailed in London during the seven weeks ending 18th January, and during the seven weeks ending 2nd November last, previous to the recent cold weather. The average weekly number of deaths in the later cold period exceeded by 481 the average number in the preceding period of moderate temperature; the annual rates of mortality being equal to 26·8 and 19·8 per 1000 respectively. The excessive mortality attributed to cold, in the second period, averaged 7·0 per 1000 at all ages; the excess of mortality, however, varied remarkably at different age-periods. Among children un-

der twenty years of age, the increased mortality due to cold did not exceed 2·8 per 1000 living, and the excess between twenty and forty years of age was but 1·3 per 1000. After forty years of age the effect of cold appears to tell much more fatally; the excess was equal to 8·7 per 1000 between forty and sixty years, to 54·4 between sixty and eighty, and to 173·0 among persons aged upwards of eighty years. The mortality of persons aged upwards of sixty years during the recent cold period was, indeed, more than double that recorded in the earlier period. The increase of mortality during the cold period among children was very small, and especially so among infants under one year of age, which affords evidence of satisfactory care of infant life in London. It appears from similar tables showing the effect of cold upon the mortality of London in two well-marked periods of low temperature in 1855 and 1874, that the recent cold weather has been somewhat less fatal among persons aged less than forty years, whereas above that age the excess of mortality due to cold has been as great as formerly.

NOXIOUS VAPOURS.

A SPECIAL meeting of the North-Western Association of Medical Officers of Health has been held in Manchester, under the presidency of Dr. H. H. Vernon, of Southport, for the purpose of considering the Report of the Royal Commission on Noxious Vapours. As the result of the meeting, it was decided to memorialise the President of the Local Government Board, and to urge upon him the desirability of amending and extending the Alkali Acts, attention being solicited to the following points:—(1) That all works creating noxious vapours shall be placed under the operation of the Alkali Acts; (2) that the present staff of inspectors under the Alkali Acts shall be increased in numbers, that efficient inspection by night as well as by day be provided, and that records of all inspections be kept and published, and all breaches of the Act reported to the local authorities within fourteen days; (3) that local authorities shall have the power to prosecute in their several districts in respect of nuisances created by alkali or allied works, as in respect of all other nuisances arising in their districts or affecting their districts; (4) that any form of nuisance arising from time to time in the progress of industry and invention may be brought under the law by order of the Local Government Board, without the necessity of an appeal for new legislation; (5) that no chemical works shall be established and no existing chemical works extended without permission from the local authority and the Local Government Board; (6) that groups of works may be made collectively liable for nuisance and damage, and may be collectively proceeded against, courts having powers to apportion damages among those contributing to the nuisances or damage.

MUSCLE MOVED BY MIND.

HOW are we to explain the prodigious feats of strength and sense—using this term with its physiological import—performed by persons actuated by an overpowering impulse? Most of the acts, such as walking, running, leaping, lifting weights, and the like, done habitually, are relegated to the class of automatic movements. They are first learnt by the mind—often through the imitative faculty—and afterwards referred to the government of that subordinate sense which seems to preside, like an adjutant of control, over the actions performed consensually,—that is, with the *senses*, but only in a subordinate degree by the will. For example, a man learns to play the piano with his will over-mastering the details of "fingering," but when he has advanced so far as to be able to play a piece, he not only ceases to think of the manipulation, but if he attempted to do so he must fail to play at all. It would seem that when some special exploit is to be performed under an impulse, such as may spring from fear, the mind calls upon a reserve stock of energy. It is surprising to what great achievements the energy so called into action will rise. Take, for instance, the case of a terrified woman leaping across a hideous chasm from the window of a house on fire; or a prisoner, intent on escape, springing from a railway-train, through an aperture barely large enough to allow his body means of exit. The exploits of lunatics acting under delusions or hallucinations are often seemingly incredible; but setting these aside, the feats performed by perfectly sane persons under strong impulse are astounding, and would be inexplicable but that the existence of a large reserve of force is known to the physiologist. The way in which the mind controls this force receives apt illustration in the familiar experience of lifting a weight—say a water-jug supposed to be full, but really empty—which has been over-estimated by the judgment. The force put out is too great, and the relatively light weight is raised with a jerk. When the mind is stirred by a great motive or by a strong passion, it excites or inspires a prodigious effort, and the result of this volition is an exploit which often passes credulity. It is interesting to know that this reserve of force exists, and to recognise that fatigue, like a sentinel, normally guards the treasury of strength from encroachment in the ordinary actions of daily life. The extent of this reserve strength in illness often measures the limit of endurance When the stock is exhausted, the patient dies.

SCURVY.

BY the courtesy of Mr. Johnson Smith, surgeon to the *Dreadnought* Seamen's Hospital, we are enabled to give a summarised report, compiled by Dr. Henry de Fonmartin, house-physician, of all the cases of scurvy admitted during the past year into that institution. They are thirty-one in number, and the table of nationalities shows that thirteen only came from British vessels, five from colonial, and the rest from foreign ships. A further analysis shows, of the British vessels two belonged to London, three to Liverpool, five to Glasgow and Greenock, two to Sunderland, and one to Shields. Of the total number, nineteen cases came from India and China, and ten from West Indian and South American ports. In eleven cases the lime-juice was given irregularly, or not at all, and in thirteen the evidence as to its administration was inconclusive, so that, as to special antiscorbutics, at least two-thirds of the cases are, in some way, accounted for. In one case, as we recorded last week, a prosecution was ordered by the Board of Trade, and a conviction obtained, and a similar conviction was obtained last week at Liverpool. Taking the *Dreadnought* statistics as typical of the rise, progress, or decline of the disease in the mercantile marine, we may consider this "Year Book of Scurvy" as eminently satisfactory, and thus far congratulate the possessors of the "*Time nihil*" motto on the success of legislation in 1867 as regards this eminently preventable disease.

THE PRINCESS MARY'S VILLAGE HOMES.

INASMUCH as we have received several communications relating to an article on this very useful institution, that appeared in THE LANCET of December 21st, and as, moreover, the *Surrey Advertiser* has been the medium of various letters on the same subject, we think it desirable very briefly to remind those of our readers who are interested in this matter as to the actual state of things. When our commissioner visited the schools, he, as well as Mr. Jacob, the medical officer of health for the district, was received with the utmost courtesy by one of the lady superintendents, who explained all the particulars described in the Report. As a result, the article recommended in effect that the sewage arrangements should be improved, that more cubic

space should be provided for the sleeping quarters of the inmates, and that the day-pupil system should be discontinued. All these recommendations were made exclusively on sanitary grounds, for it was not our province on this occasion to enter into other than sanitary subjects; and, professional contributors to the columns of the *Surrey Advertiser* notwithstanding, we maintain that, so far as structural or special sanitary arrangements are concerned, the exceptional freedom from mortality that has happily characterised this small epidemic is, to borrow a hackneyed phase, more the result "of good luck than good management," at all events as to the above particulars. We are quite willing and glad to pay a tribute of praise, and, if need be, of admiration, to the professional skill of the medical attendant and the energy and watchfulness of the nurses. But, as we remarked in a former article, it is not the business of THE LANCET to praise or appraise any particular member of the cloth; and we take this opportunity of stating that it is equally undesirable for anything of an analogous character to be recorded in the pages of a general journal, metropolitan or local.

THE GENERAL MEDICAL COUNCIL.

WE cannot gather from any accounts we have received that the time of meeting of the General Medical Council is yet fixed. This is much to be regretted, and looks as if the Executive Committee was, perhaps from preoccupation with other duties, unable to give sufficient attention to the great question of reporting, and that without delay, on the constitution of the Council. The Executive Committee will now be regarded as responsible for delay. It is a matter of notoriety that it has had frequent meetings, and an expression of opinion by it in favour of an early session would not be resisted by the President. We very much fear it will turn out that the time and energies of the Executive Committee have been distracted from their proper work, and spent over the undignified and unsatisfactory task of registering 4637 dentists, the majority of whom have no other claim to recognition than having drawn teeth, perhaps their own. The Executive Committee is summoned for Friday (this day), at 1 P.M.

INTRAVENOUS INJECTION OF MILK.

THE following are the circumstances under which this operation was performed in Dublin last week by Dr. Robert McDonnell on a patient suffering from extreme exhaustion consequent on typhoid fever.

The patient, a man about thirty years of age, took fever in November last. This was followed by great debility, emaciation, and exhaustion. Dr. Austin Meldon, under whose immediate care the patient was, tried all possible means to get up the strength. Several of the leading Dublin physicians saw the case in consultation with him, among others Dr. Lyons, who, as a last resource, suggested transfusion. Dr. Meldon asked Dr. McDonnell to see the patient with a view to his performing this operation with his transfusion apparatus. Dr. McDonnell suggested that the case was one suitable for trying milk instead of blood, as had been done by Dr. Pepper, Dr. Gaillard Thomas, and others, in America.

On Wednesday, Jan. 22nd, the operation was performed in the presence of Dr. William Smyly, Dr. Martin, and Dr. Meldon. The milk was fresh drawn from a cow on the spot. About ten ounces were passed into a vein at the bend of the elbow. During the injection the pulse rose and became fuller and stronger. Immediately after the completion of the operation the pulse became feeble, respiration laboured, and the capillaries congested. This state of depression lasted about two hours, when a distinct and truly remarkable reaction took place. The patient passed a quiet night, and expressed himself as much better and stronger on the following day. On the seventh day after the operation the patient was making good progress, taking nutriment freely, although, of course, weak and exhausted.

The full details of this interesting case will, no doubt, be published.

THE LONDON WATER COMPANIES AND THEIR CUSTOMERS.

IN December last the number of houses and other premises supplied by the eight metropolitan water companies was 553,975, showing an increase of rather more than fifteen thousand upon the number at the end of the preceding year. This year's increase of houses supplied was equal to 2·8 per cent., which considerably exceeded the estimated rate of increase among the population of London. The increase of houses &c. within the area supplied by the eight companies drawing their supply from the Thames averaged 3·2 per cent.; while the increase of the houses supplied by the Chelsea Company did not exceed 2·0 per cent., the Lambeth Company's returns showed an increase of 3·9 per cent. during the year. The average percentage of increase in the houses supplied by the three companies drawing their water from the Lea and other sources was 2·5; the New River returns showed an increase of but 1·3 per cent., while the increase in the houses &c. supplied by the East London and Kent Companies was equal to 3·4 and 3·5 per cent. respectively. The number of houses &c. supplied in December last by the eight metropolitan companies ranged from 29,438 and 38,989 by the Chelsea and Grand Junction, to 117,084 and 127,673 by the East London and New River Companies. The areas supplied by several of these water companies extend considerably beyond the boundaries of registration London.

LOW TEMPERATURE AND THE BRISTOL DEATH-RATE.

LOW winter temperature invariably exercises a powerful influence upon all urban death-rates. The causes, however, of the varying incidence of this effect of cold upon the death-rate of different towns are worth investigating. Bristol death-rates usually show exceptional increase as soon as cold weather sets in, and the increase has been especially marked during the past few weeks. During the six weeks ending January 18th the annual death-rate in the city averaged 33·1 per 1000, whereas in the preceding six weeks, before the cold weather set in, the average rate had not exceeded 22·8. Thus the Bristol mortality may be said to have increased 45 per cent. under the influence of cold weather, while the increase of mortality in the aggregate of the twenty large English towns did not exceed 23 per cent. Mr. David Davies, the medical officer of health, has called the attention of the Bristol Urban Sanitary Authority to this increase of mortality in several of his recent weekly returns. It is noted that of 133 deaths in the city during the week ending Jan. 4th, no less than 59 were referred to acute diseases of the lungs, and 8 to phthisis; thus the annual death-rate from diseases of the respiratory organs and phthisis in the week was equal to 16·5 per 1000, against but 10·6 from the same diseases in London. A portion of the city was reported by the medical officer of health to be suffering so severely from floods and defective construction that many houses had become a "nuisance and injurious to health, and unfit for human habitation, by reason of dampness and sewage driven into them by the floods." Some of these houses were described as "not much better than mud huts," and it was considered probable that the hard frost would cause many of them to subside. After discussion it was decided, at a recent meeting of the Sanitary Authority, to take proceedings before the magistrates, with a view

to getting the houses condemned as unfit for habitation. These are just the kinds of defects of sanitary condition to cause high rates of mortality from diseases of the respiratory organs, and it may be hoped that measures will be taken to prevent the erection of such houses in future in localities liable to floods, which, it is said, might easily be prevented by due attention to the condition and size of the local water-courses.

METRIC WEIGHTS AND MEASURES.

IN a leading article in our issue of November 23rd, 1878, we drew attention to the very great boon which would accrue to the medical profession by the introduction of metric weights and measures, and by the abandonment of the grotesque and obsolete system which is now in vogue. The Marine Hospital Service of the United States have gone ahead of us in this matter, and have made the adoption of metric weights and measures compulsory on all officers of that service.

In a small pamphlet which has been issued by the Military Department of the United States Marine Hospital Service, we are told that, "In expressing quantities by weight, the terms gram and centigram only will be used; and in expressing quantities by measure the term cubic centimeters. The metric system has already, under the Act of July 28, 1866, been adopted by this Service for the purveying of medical supplies, and the weights and graduated measures, as well as the glass ware hereafter furnished to medical officers, will be in accordance therewith."

The only difficulty in introducing the metric system is in familiarising practitioners with grams and cubic centimeters, a difficulty which has already been overcome by the spirited and thorough-going reform which has been introduced by our American brethren. As soon as these new measures cease to be mere names and numbers, and recall actual weights and sizes, their employment will entail neither additional effort nor extra work. A table of equivalents in the two measures is given in the pamphlet alluded to, and the doses of all preparations employed in the United States pharmacopœias are tabulated and expressed in terms of both the Apothecaries' and the metric system.

THE APOTHECARIES' SOCIETY AS PROSECUTORS.

THE Apothecaries' Society is, doubtless, well-advised in abandoning the case against Shepperley. It was a badly-managed business from the first, and, as a test case, practically useless. The illness of the supposititious patient had no real existence. The druggist saw through the trick (tricks are always immoral and deserve to be "seen through"), and he recommended a *placebo*. In short, it was not a *bonâ fide* case of prescribing, and nothing would be gained by carrying it further. At the same time, it should be distinctly understood, and, to that end, expressly stated, that there is not the slightest intention of waiving the question at issue between the Chemists and Druggists' Association and the Apothecaries' Society, and which it was the purpose of this case to raise. If the Apothecaries' Society failed in its mission to defend the medical profession by enforcing the provisions of the Apothecaries Act, it would lose the last vestige of a claim to recognition. The Medical Act of 1858 was framed on the presumption that the Act of 1815, as amended, would serve for all purposes of defence against the encroachment of the chemists. For the sake of that Act, mainly, added to some sentiment of gratitude to the old Company (as it was then not too proud to call itself) for services rendered to medical education, the Society was tolerated, and even admitted to share the *dignity* of representation in the Medical Council — whatever that may amount to! If it is not prepared to keep the back door of the profession against intruders of the class who practise nefariously while the guardians of the Act of 1858 defend us against the pretenders who assume titles to which they have no claim, the Society will speedily cease to exist.

THE RECOGNITION OF ENGLISH PRACTITIONERS IN FRANCE.

WE fear that the danger of the French Republic taking the very illiberal and retrograde step of refusing to recognise foreign medical practitioners until they have passed two examinations, one theoretical, the other practical, before a French Faculty of Medicine, is still great. A Commission, sitting in November, has reported in favour of M. Roger Marvais' Bill, which proposes to enact the above law, and which further forbids the use of the title of doctor by any one practising medicine unless it has been obtained from a French source. We will still hope that the French Legislature will pause before passing a law which will operate so harshly on a large number of English invalids, and which will conduce in no appreciable degree to the security of French subjects. The step is the more unreasonable as we are on the very point in England of taking an opposite step —that of recognising foreigners without examination who possess foreign qualifications guaranteeing a sufficient amount of knowledge for purposes of practice. We are on the point of abolishing exclusiveness. We shall yet venture to believe that the French Republic will not initiate it. We agree with the Commission that there are many worthless degrees. By all means refuse the recognition of them. But there are degrees in every nation worthy of international recognition. And the French Republic should not imitate the narrowness of a bygone time. We believe that Dr. Acland, as the President of the Medical Council, has fully represented views similar to these to the Government, and we trust that Lord Lyons will succeed in impressing them on the French Chambers.

THE POLICE AS MEDICAL PRACTITIONERS.

IT must be painful to be a policeman in these very enlightened times. He is expected to be a sound and practical lawyer, a paragon of patience, a skilled manipulator of the refractory and incapable, and both acute in the diagnosis of obscure conditions and expert in their treatment. One day we vex the spirit of our trained artisan or agricultural labourer, hired to discharge the duties of a patrol at eighteen or twenty shillings a week, by abusing him for not distinguishing between drunkenness and cerebral congestion, which is often a difficult feat for the experienced practitioner, and the next day we assail his humanity because, having rescued a woman from the River Lea, he carries her on a stretcher some three or four miles with the effect of leaving her to freeze to death. It is too bad to worry the poor policeman in this fashion. He does "all for the best," and whatever he does we are dissatisfied with, and taunt, ridicule, or oppress him. There is only one sensible course to pursue in these matters. Provide for the prompt attendance of a qualified medical practitioner in *all* cases of accident, illness, or insensibility. Let each police-station or "lock-up," whether in the City, the metropolitan district, or suburban and rural localities, be provided with a special cell, fitted with all necessary appliances, for the immediate treatment of cases of emergency. It should be possible in all cases to call in a medical man and to procure the attendance, if requisite, of a nurse. This would relieve the police from an onerous responsibility, obviate many great and deplorable risks, while it would put an end, once for all, to a multitudinous and deep grumbling, which is neither edifying nor likely to enhance the respect in which the guardians of peace and order need to be held by the turbulent classes among whom they labour. We never pen a word of necessary rebuke to the force without regret

and the reluctance which springs from the conviction that it is the system which is at fault, not the men.

THE PHYSIOLOGICAL RELATIONS OF HYPOXANTHIN AND LACTIC ACID.

HYPOXANTHIN, or, as it is sometimes called, Sarkin, is well known to be a frequent if not constant constituent of the blood in leukæmic patients, and the means of detecting it were greatly improved by Salkowski. It remained uncertain, however, whether it was to be considered as always present in healthy blood. This and several points in regard to it have recently been investigated by Georg Salomon, who has published the results at which he has arrived in the *Zeitschrift für Chemie* (B. ii. 1878, p. 94). He finds that hypoxanthin is a normal constituent of the marrow of the bones in man, and that it is also normally present in various glandular organs. It is always present in blood obtained after death, both in man and in dogs. Its presence in the blood and other organs after death in leukæmic patients affords no assistance in determining the pathological changes occurring in that disease. With rare exceptions, hypoxanthin is only found in the blood after death. Its absence in blood drawn during life from a vein is probably due to the fact that it rapidly undergoes oxidation. The same holds good of xanthin. Lactic acid is also nearly constantly present in the blood after death, and its presence in the blood of leukæmic patients is therefore destitute of significance. Lactic acid is absent, and probably for the same reason that hypoxanthin is absent, in the greater number of specimens of blood drawn from the veins during life. The lactic acid of the blood abstracted after death is in all probability the result of the decomposition of the carbo-hydrates of the blood. Lastly, hypoxanthin and xanthin are produced outside of the body by the action of the pancreas ferment on fibrin.

GLOOMY THOUGHTS AND GLOOMY WEATHER.

DULL, depressing, dingy days produce dispiriting reflections and gloomy thoughts, and small wonder when we remember that the mind is not only a motive, but a receptive, organ, and that all the impressions it receives from without reach it through the media of senses which are directly dependent on the conditions of light and atmosphere for their action, and therefore immediately influenced by the surrounding conditions. It is a common-sense inference that if the impressions from without reach the mind through imperfectly-acting organs of sense, and those impressions are in themselves set in a minor æsthetic key of colour, sound, and general qualities, the mind must be what is called "moody." It is not the habit of even sensible people to make sufficient allowance for this *rationale* of dulness and subjective weakness. Some persons are more dependent on external circumstances and conditions for their energy—or the stimulus that converts potential into kinetic force—than others; but all feel the influence of the world without, and to this influence the sick and the weak are especially responsive. Hence the varying temperaments of minds changing with the weather, the outlook, and the wind.

"MEDICAL COMFORTS" FOR PRISONERS AND PAUPERS.

THE question is frequently raised, in one shape or another, and it has been pointedly asked within the last few days, whether what we know as "medical comforts," including, of course, stimulants, can be necessary for prisoners and paupers. The issue is clearly outside the pale of serious controversy. It can make no sort of difference to a case, as viewed from the only medical standpoint, whether the patient be an embodiment of virtue or the personification of vice. He is a sick man and a patient, and if his physical or physico-mental state indicates the administration of special food or stimulants, they must be given to him, let who may demur. We are aware that here and there may be found members of the profession who, emulating the example of one of Charles Dickens's notable characters, do not hesitate to pass the boundaries of their legitimate province "as a friend." We bear in lively remembrance the report of a distinguished man who, commissioned to inspect and report on the management of an important lunatic asylum, volunteered an opinion that it was not an unqualified advantage or a wholly creditable consideration that the criminal insane inmates lived longer and passed happier lives than they might under less comfortable circumstances. We would venture to hope the opinion expressed is unique. Meanwhile, it is desirable to state, with a distinctness which shall admit of no misapprehension, that the sole consideration a physician or surgeon can honestly entertain in the treatment of any case is that of strictly medical expediency. Whether, therefore, the patient be a man undergoing penal servitude, and further accused of murder, or an irreproachable citizen, he must be *treated* as art prescribes. This is our rejoinder to the submission whether it was necessary to administer stimulants in the case of Peace after his fall from the railway carriage.

THE NAVAL MEDICAL SERVICE.

WE have received during the past week more letters on the Naval Medical Service, and publish one of them (which will be found in another column), because it is just that the writer should have the opportunity of replying to a query addressed to him in THE LANCET of the 25th ult. We shall await with interest the results of the next examination, which is advertised for the 17th inst., having been credibly informed that the number of candidates already indicate an appreciable increase as compared with the lists on several recent occasions. And we may now venture to predict that the future of the Navy Medical Department may yet be bright, if, in addition to some reforms that we have indicated, a judicious selection is made for the chief post at Whitehall that will be vacated some two months hence by its present occupant. Much may depend upon the choice made.

VACCINATION CERTIFICATES AND UNQUALIFIED ASSISTANTS.

A SERIOUS irregularity has been under discussion by the Tynemouth Board of Guardians. A gentleman was not long ago appointed medical officer and public vaccinator in place of Mr. Hislop, resigned. One of the guardians called the attention of the board to the fact that a number of vaccination papers were signed by a person who was not a duly qualified practitioner. The certificates were consequently invalid; and the parents who had loyally complied with the law were liable to prosecution. The clerk of the board vainly suggested that the irregularity should be referred to the General Medical Council; with a sounder judgment the guardians agreed to refer the matter to the Local Government Board.

WE have authority for stating that Dr. William Farr, F.R.S., who has been the chief of the Statistical Department of the General Register Office since 1839, is a candidate for the appointment of Registrar-General, which will be vacant at the end of the year through the resignation of Major Graham, who has filled the post since 1842.

A FAREWELL dinner was given by the medical officers of the Volunteer Ambulance Department to Surgeon-Major M'Nalty, Army Medical Department, at the Holborn Restaurant, on January 23rd, on the occasion of his re-

signing the office of Vice-President of their Society, consequent on his departure for Afghanistan. Surgeon-General W. Munro, C.B., the President, was in the chair, supported by Deputy Surgeon-General Irvine, Captain Pringle, Army Hospital Corps, and Lieut. Maclure, London Scottish (hon. secretary). A numerous gathering of medical and other officers assembled to do honour to their guest, whose health was proposed in a felicitous speech by Dr. Munro, and cordially received. We are glad to note this meeting of army and volunteer officers as evidence of that *entente cordiale* which should exist between members of the regular and reserve forces belonging to the same profession. Should England ever be engaged in a European conflict the Volunteer Ambulance Department will be a useful auxiliary and reserve to the Army Medical Service for home and other duties.

AT a meeting of the Corporation of Dublin, held last Monday, a letter was read from Dr. Mapother tendering his resignation of the post of superintendent medical officer (which he accepted without additional salary in December, 1877), and stating that he would still continue to discharge the duties of consulting sanitary officer. The letter was referred back to the Public Health Committee, who were requested to draw up a report of the duties Dr. Mapother fulfilled up to 1874, the additional duties imposed upon him by the Act of 1874, for which he received an additional £150 a year, and to report to the Council the duties fulfilled by him as Sanitary Officer of the city.

THE Hunterian Oration will be delivered by Dr. Humphry, F.R.S., on Friday, the 14th proximo. A festival will take place in the evening in the library of the College, to which a large number of distinguished guests have been invited, many having accepted the invitation. It is a remarkable fact that since the days of Mr. South no President of the College has had the courtesy to invite representatives of the medical press to the entertainment, although those of the lay press do not seem always to have been forgotten.

THE medical officer of health for Leeds, Dr. Goldie, in his report for the month of December last, comments on the absence of typhus from the borough, the spread of scarlet fever by the needless frequenting of funerals by women, and the desirability of providing houses of refuge to which families may be removed whilst their houses are undergoing disinfection.

MR. J. HUTCHINSON, F.R.C.S., who has succeeded Mr. Spencer Wells, has selected for his course of lectures to be delivered in the theatre of the Royal College of Surgeons, the following:—"On certain Diseases of the Eye, Skin, and Joints, which are produced through the Influence of the Nervous System." Professor Parker's course will precede that of Mr. Hutchinson.

THE Report of the Medical Officer of the Local Government Board (Dr. E. C. Seaton) for 1877 has just been published in a supplement to the seventh Annual Report of the Board. It forms almost as portly a volume as the Report of which it is an appendix, and it fully sustains the high reputation of the Medical Department.

THE distress in Sheffield has not caused a serious decrease in the amount subscribed on Hospital Sunday. Last year £1940 were given; and when all is paid up, the total received this year will be only a few pounds short of this amount.

IT is proposed to establish a Convalescent Hospital in Dublin for small-pox cases, and several subscriptions have already been received for the purpose.

IT is officially stated that Mr. Darwin's name has not been removed from the lunar nomenclature by the council of the Selenographical Society. Opposition evinced against Mr. Darwin's doctrines on evolution had given rise to some newspaper paragraphs which contained the false news in question.

THE next Actonian Prize will be awarded for an essay on "The Structure and Functions of the Retina in all Classes of Animals, viewed in relation with the Theory of Evolution." The value of the prize is 100 guineas, and it will be awarded or withheld as the managers of the Royal Institution shall think proper.

THE REVISION OF THE MEDICAL COUNCIL.

V.

REMEDIAL SUGGESTIONS.

WE are now in a position to consider the kind of changes which are necessary in regard to the Medical Council. We have shown by ample and undeniable facts that the Council of Medical Education does not promote medical education in any satisfactory degree; that it is hindered in its debates by having to consider the pecuniary interests of the teaching and the examining bodies, and the extent and way in which these would be affected by any changes in the methods of education or in the system of examinations for licensing persons to practise medicine in all its branches. We have shown, further, that when the Council does emerge from a long discussion, in committee, of propositions that have probably been discussed and rediscussed half a dozen times, and that are in themselves only superficial, and do not touch the root of the evils in medical education, it winds up by passing resolutions which take the form of Recommendations to the medical schools and the examining boards, which are often simply impotent and unheeded. The careful analysis by Dr. Aquilla Smith of the annual returns of the final examinations by the several medical licensing Bodies during fifteen years—a time, be it observed, when there has been much progress in the methods and results of general education—shows that the number of rejections at these examinations has been nearly doubled. It was in 1861 only 12·4 per cent., and in 1875, 23·2 per cent. All this radical failure in a body which costs the profession £6000 a year, is, besides, bad for the public, and represents an inferior amount of medical education to that which might be procured. Finally, we have seen with deep concern of late weeks that the Medical Council, through its Executive Committee, is deeply occupied in administering the Dentists Act, by which its time and its energies must be much abstracted from the proper work for which it was originally created, and its estimate of medical education and its demands is likely to be gravely lowered.

Under all these circumstances we have the following propositions to make:—

Firstly. That no amendment of the Medical Act can be satisfactory which does not include, as a primary point, the reconstitution of the General Medical Council.

Secondly. That no amendment of the Medical Act, not even one including the reconstitution of the General Medical Council, will be satisfactory which does not provide that the Council shall have power to enforce its own recommendations; or, rather, that its authority over the curriculum of study, and over the times and methods of examinations, shall be final and absolute, so that its conclusions shall issue no longer in the feeble form of Recommendations, but of Regulations binding at once on students and the examining boards. We shall take the last point first.

It would be at once a misfortune and an absurdity if a Bill were to pass consolidating all the examining bodies, and yet leaving to them, or to the conjoint boards under which form in future they will chiefly exist for examining purposes, the power to act independently in regard to the curriculum of medical study, and the details and methods of examinations. The chief end of legislation is on all hands admitted to be the improvement and the equalisation in different parts of the kingdom of the *minimum* examinations; in other words, the examination for the diploma or licence entitling men to be registered and to practise in every part of the United Kingdom. How can this end be attained if three different bodies are to regulate curricula and modes of examination in England, Ireland, and Scotland? There is no room here for complaints of centralisation, and taking from the liberties of England, Ireland, or Scotland. The Medical Council is a body in which all these divisions of the kingdom are fully represented, and it is but respectful to them to give their decisions the weight of binding regulations. Moreover, registration confers imperial not merely territorial privileges, and the whole object of legislation is to make it represent an amount of education in the registered practitioner without which he cannot be efficient. This quantity cannot vary. It must be the same in all parts of the United Kingdom. A crowning reason for making the Medical Council responsible for the equalisation of the education and examinations in the various divisions of the kingdom—so far as title to registration is concerned—is to be found in the fact that it is expected, under the conjoint arrangements contemplated in all Medical Bills, that the cost of the diplomas will be unequal. Legislation, to be effective, should equalise the cost of examinations, as well as their severity. But it should, at any rate, fasten upon one body the duty of securing their uniformity, and the one body that can and ought to discharge such a duty is the Medical Council. We regard this as a vital matter. And we urge it the more hopefully as the Duke of Richmond's Bill, in its first form, in the fourteenth clause, gave the Council this power. As we have shown, the Council itself, with characteristic dread of responsibility, and with characteristic obeisance to the individual bodies which it so faithfully represents, begged the Government not to endow it with more power than it has—that is, with none. The Government will consult the interests of medical education by fastening responsibility on the Council, and insisting on the fourteenth clause being retained in its original form.

We come now to the question of the

RECONSTITUTION OF THE COUNCIL.

1st, and preliminarily, *We are strongly of opinion that the Council should be relieved of its present duties under the Dentists Act; and should decline the duties which it has almost agreed to undertake in connexion with a legislative attempt to educate and recognise midwives.*

The Council is *the Council of Medical Education*—not of *bits* of medical education; and the sooner it reverts to its essential and original duties the better for its own dignity, for the reputation of the profession, and for the interests of the public. We are opposed on principle to the introduction of anything like specialism into the work of the Council. It has to do only with medical education in the broad sense of that expression. If special lines of practice must be recognised by law, the law should devolve the duty of recognising them on special bodies, not on a Council which represents medicine in its entirety and in its adaptation to general practice.

2nd. *The predominant representation of interested bodies should be abolished.*

This can be done by requiring two or more universities or corporations to combine for the election of a representative, as is already done in the case of the universities of Scotland, which do more for medical education than all the others put together. This principle of uniting several bodies for the purpose of electing a joint representative in the Medical Council was embodied in THE LANCET Bill of 1871, introduced by Dr. Lush, Mr. Mundella, and Dr. Brewer. Four representatives were assigned to the "medical authorities," universities, and corporations; four to the Crown; and four to the registered practitioners of the United Kingdom. This principle, borrowed, as we have said, from the Act of 1858, wants to be extended. Every Bill dealing with the question of the Medical Council does so extend it, except the Bill of the British Medical Association, which leaves the predominant representation of the interested bodies intact; and Sir Dominic Corrigan carried it so far as to reduce the representatives of corporations to three, and of universities to three, abolishing the representation of the Crown, save in so far as he retained for it the right of electing a president, and of sanctioning the rules and regulations of the Council. A Bill is now before Parliament, introduced by Dr. Lush, which would give a Council of nineteen. The reduction in numbers is gained by combining several bodies for joint representation, leaving the individual representation of others as at present. Here are three attempts to deal with the great evil of over-represented interests in the Medical Council, all on the principle of conjoint representation, which indeed should accompany the legislative consolidation of the examining bodies. If the Government cannot see its way clear to a Council of twelve—a third representing the Crown, a third the medical authorities, and a third the registered practitioners—it must at any rate reduce the representation of individual bodies, some of which may well claim to have fulfilled the design of their existence, and to be relieved of further duties, except as part of a combined arrangement.

3rd. *The profession at large should be represented.*

There is here an almost perfect *consensus* of opinion. Even the Medical Council will probably concede that the registered members of the profession should have representatives on the Council—first, as a matter of simple justice to them; secondly, as one of the best means of neutralising the influence of vested interests in the Council and furthering medical education. If the Government will fairly reduce the individual representation of bodies, four direct representatives of the profession may suffice; if not, six will be too few.

Such are the proposals we have to make for the reconstitution of the Council and for investing it with fuller authority. We have given urgent reasons for making these changes and for objecting to any amendment of the Medical Act which does not include them. Under these circumstances it is to be hoped that the Government will either make them or agree to the appointment of a Select Committee to consider them, before attempting the amendment of the Medical Act.

THE PLAGUE IN RUSSIA.

WE are this week enabled to lay before our readers a translation of the first detailed official medical report which, we believe, has been made public by the Russian Government, of the very fatal disease that has lately appeared in the province of Astrakhan. Although the writer of the report hesitates to come to a conclusion on the precise nature of the disease in question, we fear that the description of the symptoms he gives are explicable only on the assumption that the malady is true plague. The report is from the pen of Dr. Döppner, the principal medical officer of the Cossack troops in Astrakhan, and the sole survivor of the medical men who

have had the opportunity of witnessing the disease from its earliest development to the present time. Dr. Döppner writes:—

"At the beginning (O.S.) of last November several inhabitants of Vetlianka were attacked with fever. After several paroxysms, and at the end of seven or eight days, the lymphatic glands of the armpits became swollen. On receiving information of this occurrence of fever I visited Vetlianka on Nov. 18th (O.S., Nov. 30th N.S.), and found there eight sick people presenting the following symptoms:—Moderate fever, enfeebling and intermittent; the patients still on foot, with appetite, sleep, and the organic functions unaffected; abscesses, spontaneously formed and discharging much matter, of the lymphatic glands of the groin or of the armpits; duration of the malady from ten to twenty days. All these patients eventually recovered. In the month of May, 1877, I had observed symptoms similar to these, and also ending in recovery of the patients, at the advanced post on Mount Caucasus, where five out of forty persons were seized with them.

"After the 27th November, 1878 (9th December), a new disease appeared in Vetlianka which attacked numerous people, some of whom succumbed to it. I made a second visit to the place, and I found there twenty-three persons suffering as follows:—Violent headache affecting the forehead and temples; pains in all the limbs; transient shiverings preceded by burning heats in the body and the eyes; abdomen tense; liver enlarged; pulse 100 to 120. These symptoms continued for three or four days, and, in the more favourable cases were followed by perspiration and general enfeeblement, but in the greater number of the cases the symptoms recurred at the end of two or three days, and were followed by delirium, sleeplessness, restlessness, a temperature of 42° R., dryness of tongue, dejections very frequent and involuntary, urine scanty and reddish, and death occurred after the second, or more rarely after the third paroxysm, with convulsions and total prostration of the vital powers. The corpses rapidly became decomposed and cadaveric discolouration occurred twelve hours after death.

"From the 17th (29th) November to the 9th (21st) December, of 100 persons attacked 43 died and 14 recovered. After the 9th (21st) December the character of the malady became much more acute. The person attacked was suddenly seized with palpitations of the heart, irregularity of pulse, vomiting, faintings, oppression at the chest, and spitting of clear, fluid blood; the aspect became pale, the expression apathetic, the eyes dull, and the pupils dilated. The patient lay for three or four hours in a state of absolute prostration, then a violent accession of fever with delirium followed, the urine was suppressed, and there was constipation.

"After the 10th (22nd) December to all these symptoms were added spots upon the body, of dimensions varying in size from a pea to a piece of ten copecks; the sick exhaled a peculiar odour, something like honey, and death was preceded by lethargy and collapse. The corpses became decomposed at the end of two or three hours. From the 9th (21st) December to the 14th (26th) December, the number of patients continually increased, and finally reached one hundred.

"During my first visit to Vetlianka I saw only six persons suffering from intermittent or low *(débilitante)* fevers, in the course of which the lymphatic glands became swollen (Griesinger), and I reported accordingly. This form of disease, according to Griesinger, sometimes precedes maladies of a more serious nature, a statement confirmed by the events under consideration. At the time of my second visit to Vetlianka, and during the ten days I then passed there, in the midst of the epidemic, my observations showed me that the disease was a kind of inflammatory fever, and I reported in that sense.

"According to the statements of the assistant-physicians who are under my direction, the disease which appeared on Nov. 27th (Dec. 9th) appeared when there were no longer any cases in Vetlianka of the disease presenting the symptoms I observed on Nov. 18th (30th). I admit, however, a close bond of connexion between the first category of disease and the second. The swelling, inflammation, and suppuration of the lymphatic glands were the principal symptoms of the first phase of the epidemic. These symptoms were reproduced in a frightful degree during the second phase, causing death in from twelve hours to three days. I am disposed, therefore, to characterise this epidemic either as a very acute form of typhus, or as a peculiar kind of plague (*pestis indica*, Hirsch), or as a new disease of a nature intermediate between typhus and plague.

"Vetlianka is situated in the district of Jenotaiew, one hundred and ninety-four versts from Astrakhan, twenty versts from Nicolsky, and ten versts from Pricheba. It lies on the right hand of the Volga, in an open situation, at a considerable altitude above the level of the sea. The soil is clayey; the vegetation, wormwood and feather-grass, scanty. The stanitza has existed a century: it contains a population of about 1700 souls; the houses, all of wood, numbering 300. The buildings are of medium size, and uncleanly within. The cemetery is placed at one hundred sagenes distance to the west of the stanitza. The inhabitants are all engaged in fishing as their occupation; no other industry exists in the place. At the foot of the hill, near the stanitza, is a fishery, the property of a private individual, to which the attention of the Minister of the Interior has been drawn. Old inhabitants affirm that at the time when cholera prevailed in the district Vetlianka suffered more than neighbouring localities. The mortality from contagious diseases, such as scarlet fever, measles, fevers, &c., is also always greater there. From 1859 to 1860 syphilis was widely spread in the stanitza; and in 1864 inflammatory fevers were prevalent.

"During the last epidemic [the epidemic under consideration], from the end of November (O.S.) to the 14th (26th) December, the weather was moist, foggy; the temperature variable, alternating between + 2° and + 14° R.; winds were rare, but occasionally blowing softly from the south-west, and a fine rain fell at intervals. On the 12th (24th) Dec. there was snow, which quickly melted.

"During my stay in Vetlianka the disease prevailed chiefly in the north part of the stanitza. After visiting the sick, in company with Dr. Koch, on the 18th (30th) Nov., I administered internally quinine in large doses and chlorinated water, treating the affected glands, if suppurating, with compresses of carbolic acid; if not suppurated, with mercurial ointment. As the effects of this treatment appeared to be good, I left Vetlianka, together with Dr. Koch, at the end of four or five days.

"When the epidemic showed itself in a more acute form (or rather on the explosion of a new epidemic) I returned to the stanitza, where I found also Dr. Koch. I then began to separate the sick from the healthy, dividing the place in four parts. I also disinfected the houses, and superintended the execution of articles 945–965 of the medical police regulations.

"The necessary remedies were employed to combat the disease. I prescribed especially salicylic acid, muriatic acid, quinine, &c., but everything proved useless. Not a single patient recovered. All the medical men who gave assistance—namely, Dr. Koch and six of his assistants, died; the priest of the stanitza; the Cossacks employed in burying the dead,—in a word, all those who approached the persons attacked with the disease, although furnished with the means of preservation used in like circumstances. Very few escaped the plague.

"The impossibility of conquering the evil by physic has convinced me that practically it remains but to institute a rigorous service of quarantine, leaving aside for the moment possible discussions on the name and character of the epidemic. I reported in this sense to Colonel Pickhanow on the 11th (22nd) December. The *ataman (locum tenens)* has taken the necessary measures. I have not made any observations since the 14th (26th) December, in consequence of having become myself ill with fever and a nervous disorder."

Information from Astrakhan to the 23rd January states that the epidemic has, for the moment at least, disappeared from Vetlianka and neighbouring districts. The death of another medical man (military), Dr. Gregoriew, is also reported. It is further stated that Dr. Krassovsky is giving attention to the state of the tanks on the banks of the Volga and in the houses in the infected district in which fish is salted. These would appear to be in a very offensive condition, and their destruction is recommended.

The German and Austro-Hungarian Governments have been conferring together on the means to protect their respective territories from any extension of plague from Russia. Acting on the assumption that the fatal epidemic in Astrakhan is true plague, it has been decided (so it is reported) to at once impose the strictest quarantine on

arrivals from Russia or the frontier. Certain articles of merchandise are to be prohibited from entering into Germany or Austro-Hungary, and all persons coming from the plague-stricken districts are to be subjected to a twenty days' quarantine on arrival at the frontier stations communicating therewith. A medical commission is to be sent to Astrakhan to study the disease there. The North Railway, moreover, has determined to put a stop to direct traffic between Warsaw and Vienna by way of Granitza!

Correspondence.

"Audi alteram partem."

FILARIÆ AND LEPROSY.

To the Editor of THE LANCET.

SIR,—The courtesy of correspondents has recently made me the recipient of several fresh announcements on the subject of Filariæ. For the most part, the communications are too voluminous for publication, but in respect of one of them I think you will allow me space for a brief notice.

Dr. Bancroft, on his homeward voyage, saw a number of lepers at Cape Town, and shortly after arriving at Melbourne, Dr. McKne supplied him with the histories of several Chinese lepers "up the country." At Sydney leprosy was occasionally seen amongst the Chinese. On Dr. Bancroft's return to Brisbane, the house-surgeon of the hospital, Dr. Thomson, reported that he had seen a case of leprosy in an out-patient. Having, after much trouble, found out the case, it was ascertained that the victim was an English colonist, and, further, that his blood contained hæmatozoa. So far as Dr. Bancroft is aware, this is the only instance of a European having taken leprosy in Queensland. Writing from Brisbane on the 22nd of November, he reports the case as follows:—

"A. B——, aged forty-nine, native of Exeter, England; in the colony twenty-five years; labourer, has seven children, all healthy. He has worked among timber, and at various occupations. Always lived in a suburb of Brisbane, and has used well- and swamp-water. Four or five years ago noticed the middle finger of left hand to become numb; afterwards a blister formed over the metacarpo-phalangeal joint; this led into the joint. The finger was amputated at the Brisbane Hospital, by Dr. O'Doherty. Patient remarked at the time that the neighbouring ring-finger was losing its sensibility. This happened about twenty months ago. The little finger was next attacked, then the forefinger of the right hand. After this a water blister formed at the metacarpo-phalangeal joint of the little finger of the left hand, which led to permanent flexure of the finger. At the present time there is much loss of power and sensation in the hands; one forefinger has no sensation, and a penetrating ulcer exists on it. Right cheek is red and thickened, with disorderly sensation. On the thighs are several anæsthetic patches with sinuous reddish lines bounding them, to which lines lead visible cutaneous vessels. One of these I punctured; it bled freely, and in the blood I found four filariæ. Patient complains of much debility and dyspepsia. He has never had syphilis.

"The feet are affected, but I have not yet examined them. He has inguinal hernia and wears a truss."

At the close of his letter Dr. Bancroft incidentally remarks that he has re-examined the blood of two patients who formerly had filariæ associated with abscesses of the arm. Their blood is now free from hæmatozoa.

I am, Sir, yours truly,

Jan. 1879. T. SPENCER COBBOLD.

ON EXTERNAL URETHROTOMY.

To the Editor of THE LANCET.

SIR,—The improved method of performing external urethrotomy in cases of impassable stricture, described by Mr. G. B. Morgan at p. 78 of THE LANCET for Jan. 18th, is erroneously attributed by him to Mr. Coulson. The operation is the combined work of Dr. Gouley, Mr. Wheelhouse, and myself, and has been fully described by me elsewhere. The following extract will show what Mr. Coulson's procedure really was, and how greatly it differed from the operation attributed to him by Mr. Morgan:—

"*Procédé de M. Coulson.*—Ce chirurgien porte un cathéter cannelé jusqu'au rétrécissement, il incise le périnée, et il fait la boutonnière derrière le rétrécissement; par cette ouverture il introduit un stylet cannelé dans le stricture, jusqu'à ce qu'il soit presque en contact avec le cathéter appuyé sur la face antérieure de l'obstacle; il incise ensuite sur la stylet cannelé toute l'épaisseur des tissus de la portion de l'urètre rétrécie; il fait ainsi cesser la rétention en même temps qu'il opère le rétrécissement."[1]

I remain, Sir, your obedient servant,

Portman-square, Jan. 22, 1879. W. F. TEEVAN.

Obituary.

DR. HERMAN BEIGEL.

WITH much regret we have to record the death of this distinguished physician at Vienna, at the early age of forty-nine, of carbuncle. He will doubtless be remembered by many of our readers as for many years physician to the Metropolitan Free Hospital, and lecturer on skin diseases at Charing-cross Hospital. His character afforded a signal example of great enterprise and ability, by which, in spite of the difficulties of language and manner which a foreigner has to contend with, he was able to reach a position of prominence in London, and to compete successfully for the honours and emoluments of professional life. The promise of greater distinction which his career with us afforded was, however, cut short by a bereavement, than which there is none greater. To assuage his grief he at once sought the relief which comes of activity and excitement, and threw himself with energy into the duties of surgeon in the Franco-German war. His services and his bravery were signalised by the German Emperor at the close of the war by the award of the Iron Cross. After his return he settled at Vienna, and betook himself once more to the scientific and scholarly pursuits in which he had previously won fame. His premature death at a time when his value was esteemed by a wide circle of patients, as well as by members of his own profession both in London and in Vienna, will leave a void not easy to be filled.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having passed the required examination for the diploma, were duly admitted Members of the College at a meeting of the Court of Examiners on January 23rd:—

Davies, E. E. C. C., Pontnaen, Lampeter.
Elliot, Henry, Cullercoates, Northumberland.
Forsbrook, W. H. Russell, Loughborough-road.
Lory, W. John, Stoke Damerel, Devon.
Mason, W. Harrup, Leeds.
Nicod, L. C. Napoleon, Ealing.
Payne, C. Alexander, Lewisham.
Smith, H. Arthur, L.R.C.P. Ed., Windsor.
Waldo, F. Joseph, Clifton, near Bristol.
Weston, S. T. Darby, Halesowen.
Wharry, A. James, Old Charlton, Kent.
Young, C. Louis, Pembroke-square.

The following gentlemen passed on Jan. 24th:—

Collier, M. P. Mayo, L.S.A., Turnham-green.
Freeman, W. Thomas, Burnham, Norfolk.
Griffiths, H. Tyrrell, Devonshire-place.
Hall, J. Lees, L.S.A., Porchester-gate.
Layton, H. Albert, Highbury-grove.
Morrison, J. T. Jackman, Plumstead, Kent.
Preston, A. Chevallier, Swaffham Prior, Cambs.
Vores, Arthur, Great Yarmouth.
White, R. Watts, Blakeney, Gloucestershire.

The following gentlemen passed on Jan. 27th:—

Congreve, G. Thomas, L.S.A., Peckham.
Fuller, T. Warberton, New Shoreham.
Giles, F. William, Henley-on-Thames.
Greathead, J. B. Smithson, Graham's Town, Cape of Good Hope.

[1] Traité des Maladies des Voies Urinaires, par le Docteur Ch. Phillips, p. 189.

Jenkins, J. Henry, L.R.C.P. Ed., Cheltenham.
Leatham, H. Blackburn, L.S.A., New Zealand.
Miller, H. Percy, Stoke Newington.
Ogle, C. John, L.S.A., Hunter-street, W.C.
Price, E. Morris, Bridgend, Glamorganshire.

Of the 145 candidates examined during the past and present week, 73 passed to the satisfaction of the Court and obtained their diplomas; 29 passed in Surgery, and when qualified in Medicine will be admitted Members; the remaining 43 failed to reach the required standard, and were referred for six months' further professional study. Fourteen candidates who had passed in Surgery at previous examinations, having subsequently obtained a medical degree or licence recognised by the College, were also admitted Members.

UNIVERSITY OF DURHAM. — The following candidates passed the First Examination for the degree of M.B. at the College of Medicine, Newcastle-on-Tyne, on Jan. 22nd, 23rd, 24th, and 25th :—

Bedford, Walter George Augustus.
Black, William Glaholm.
Bowman, Hugh Torrington.
Burton, Francis Henry Mercaron.
Crick, Samuel Arthur, M.R.C.S., L.S.A.
Davis, William Henry.
Robinson, Charles William.
Stubbs, Charles Pickering.
Trewman, George Turner.
Tyson, William Joseph, F.R.C.S., L.R.C.P.
Willis, Charles Fancourt, M.R.C.S., L.R.C.P.
Woodman, William Edwin, M.R.C.S., L.S.A.

Four candidates failed to satisfy the Examiners.

APOTHECARIES' HALL. — The following gentlemen passed the examination in the Science and Practice of Medicine, and received certificates to practise, on Jan. 23rd :—

Gilder, Sherrington Ernest A., Barnsley, Yorkshire.
Hall, William Henry, Woodlands, Caterham.
Leatham, H. Blackburn, New Plymouth, New Zealand.
Sayer, Tom, Swaffham, Norfolk.

The following gentleman on the same day passed the Primary Professional Examination :—

Bennett, Deane, St. Mary's Hospital.

At the Preliminary Examination in Arts held at the Hall on Jan. 24th and 25th, 88 candidates presented themselves, of whom 25 were rejected, and the following 63 passed and received certificates of proficiency in General Education :—

FIRST CLASS (in order of merit).—1st: Arthur Henry Gordon and Francis Harris. 3rd: M. Adler, H. G. Blacknore, A. G. Francis, G. F. Pollard, H. L. Stevens, F. J. Stevens, and A. O. Ward.

SECOND CLASS (in alphabetical order).—R. Andrews, W. A. H. Barrett, H. W. R. Bencraft, E. H. Brookes, H. Buckland, J. L. C. Cox, W. P. Davis, A. E. Dodson, H. W. G. Doyne, N. I. Edgehill, F. G. Ellerton, W. M. Ellis, F. Eschauzier, J. B. Fowler, P. G. Gilmour, W. P. B. Goodridge, J. E. R. Grant, C. A. Griffith, M. Halley, G. V. Hewland, W. P. Hilliam, Clara S. Hopgood, E. Jessop, Philip Johnson, J. M. B. Joyce, H. A. Kent, F. W. Kerkham, W. B. Laurie, E. E. Lefroy, C. W. Low, W. O. Magoris, G. L. Moore, W. A. de A. Norris, H. L. Parry, Allan Perry, J. M. S. Preston, J. S. Robertson, A. H. Roosmale-Cocq, S. Rumboll, H. T. D. Ryder, H. A. Seagrove, R. G. Silverlock, P. Albert Smith, S. D. Stilwell, F. J. Stone, F. H. Taylor, A. J. Turner, E. M. Tyrrell, B. Volkman, Emma M. Walker, G. Wale, A. M. Whitehead, A. R. Willson, and J. C. Young.

JOHN LANGSTON, F.R.C.S., of The Friary, Strood, has been placed on the Commission of the Peace for the city of Rochester.

DR. HENRY SEARLE GAYE has been elected Coroner for the Totnes District of the County of Devon, vice Michelmore, resigned.

DR. REES HOPKINS, Medical Officer of the Pontypridd Union Infirmary, has been presented with a silver cup by the patients, as a token of esteem.

DURING the week ending January 18th, the death-rate in Dublin was 48 per 1000 inhabitants, Belfast 45, Cork 40, Sligo 39, and Waterford 37 respectively.

AT the Annual Meeting of the Governors of the Birkenhead Borough Hospital an alteration was made in the rules, extending the term of service of the hon. medical officers from fifteen to twenty-one years.

THE death-rate of London last week was 26·1 per 1000, as compared with 27·0 and 28·1 in the two preceding weeks. There were 24 deaths attributed to small-pox, 18 to measles, 46 to scarlet fever, 7 to diphtheria, 71 to whooping-cough, 25 to different forms of fever, 13 to diarrhœa, and 554 to diseases of the respiratory organs.

UNIVERSITY OF DUBLIN.—Last week the degree of LL.D. *honoris causâ* was conferred on Lord Dufferin, Earl Rosse, and Professor Roscoe, the distinguished chemist.

VACCINATION GRANTS.—The following gentlemen have received the Government grant for successful vaccination:—Mr. G. K. Sproule, Frome, £22 8s. (second time); Mr. J. A. Bright, Glastonbury (third time).

LIVERPOOL MEDICAL INSTITUTION.—The following gentlemen have been elected office-bearers for the ensuing year:—President: Dr. Waters. Vice-presidents: Mr. Manifold, Dr. Oxley, Mr. Puzey, and Mr. Newton. Treasurer: Dr. Dickinson. Hon. Secs.: Dr. Caton and Mr. Edgar Browne. Council: Drs. Davidson, D. Williams, W. Williams, Howie, and Graham; Messrs. Warburton and Bernard.

THE HUNTERIAN SOCIETY.—The general meeting of the members of this Society, for the purpose of electing officers for the ensuing year, will be held in the London Institution on Wednesday, February 12th, at half-past 7 o'clock. On the same evening, at 8 o'clock, the Hunterian Oration will be delivered by Mr. Rivington in the theatre of the institution. The annual dinner of the members and their friends will take place at the Albion, Aldersgate-street, on Saturday, February 15th, at half-past 6 o'clock.

BEQUESTS ETC. TO MEDICAL CHARITIES. — Miss Mary Ann Booth, of King Edward-road, Hackney, bequeathed 300 guineas each to the Cancer Hospital, St. Mark's Hospital for Fistula, the North-Eastern Hospital for Children, the North London Hospital for Consumption and Diseases of the Chest, the City of London Truss Society, the Margate Infirmary, the Royal Medical Benevolent College, the Stoke Newington Dispensary, the Surgical Aid Society, the British Home for Incurables, and the National Hospital for the Paralysed and Epileptic. Mr. P. P. Law has given a second £500 to the Hospital for Incurables, Dublin.

UNIVERSITY INTELLIGENCE. — The Board for admitting and superintending non-collegiate students give notice that an exhibition of £30 a year, tenable for three years, granted by the Worshipful Company of Clothworkers for the encouragement of proficiency in physical science, will be awarded by means of the examination for certificates to be held next July, under the authority of the Oxford and Cambridge Schools Examination Board. A similar exhibition will be offered at the same time by the Company, to be held by an unattached student at Oxford. The candidate who shall most distinguish himself in the examination will have the option of accepting either the Oxford or the Cambridge exhibition; the remaining exhibition will then be offered to the candidate who, in the judgment of the examiners, appears to be next in order of merit, provided always that, in their judgment, the candidates are of sufficient excellence to deserve the assistance thus provided. Candidates must be non-collegiate students of one term's standing, or persons who have not yet commenced residence in the University, and the successful candidate for the Cambridge exhibition must, on election, be admitted, if not already admitted, as a non-collegiate student, and begin his residence in the following Michaelmas term. Full information as to the subjects of examination, the conditions of tenure of the exhibition, and the preliminary steps to be taken by candidates, may be obtained from the censor of non-collegiate students, Rev. R. B. Somerset, Cambridge.

Medical Appointments.

BENYON, S., L.R.C.P.I., M.R.C.S.E., & L.M., has been appointed Medical Officer for the A Relief District of St. George's Union, vice Bloxam, deceased.

BINNS, W., L.R.C.P.Ed., L.F.P.S.G., has been appointed Medical Referee for the Finchingfield District of the Essex Provident Society, vice Vernon, resigned.

BLAKER, T. F. I., M.R.C.S.E., L.S.A.L., has been appointed Honorary Surgeon to the Brighton and Hove Lying-in Institution, Hospital, and Dispensary, for the Diseases of Women and Children, vice Salzmann, resigned.

BROOKING, C. H., M.D., has been appointed Medical Referee for the Felstead District of the Essex Provident Society, vice Parkerson, resigned.

BUCK, J. S., M.R.C.S.E., has been appointed an Assistant Medical Officer to the Three Counties Lunatic Asylum, Arlesey, Baldock, Herts, vice Kebbell, appointed Senior Assistant Medical Officer to the Gloucestershire Lunatic Asylum.

CAMERON, A., M.D., C.M., has been appointed Medical Officer of Health for the Caistor Rural Sanitary District, Lincolnshire, at £30 per annum, vice Mackintosh, deceased.

CARDEW, G. A., M.R.C.S.E., L.S.A.L., has been appointed Resident Medical Officer to the Cheltenham General Hospital, vice Hartley, resigned.

CHRISTAL, J., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Attendant to the Royal Irish Constabulary, Collon, co. Louth, vice Supple, resigned.

DOYLE, C. W., M.B., C.M., has been appointed Assistant-Surgeon-Accoucheur to the Norwich Lying-in Charity, vice Mercier, resigned.

FITZGERALD, E., L.R.C.P.Ed., L.R.C.S.I., L.A.H.D., has been appointed Medical Officer to the Mallow Union Workhouse, co. Cork, vice Barry, deceased.

GAWITH, J. J., M.R.C.S.E., L.S.A.L., has been appointed a Medical Officer to the Westbourne Provident Dispensary and Maternity, vice Hastings, resigned.

GUNN, J., M.B., C.M., has been appointed Medical Officer for the West Dispensary District of the Royal Infirmary, Dundee, vice McDonald, deceased.

HARDING, R., L.R.C.P.Ed., L.F.P.S.G., has been appointed Medical Officer and Public Vaccinator for the New Radnor District of the Kington Union, Herefordshire, vice Brucerton, resigned.

HUGHES, R. L., L.K.Q.C.P.I. & L.M., L.R.C.S.I., has been appointed Medical Attendant to the Royal Irish Constabulary, Kilcock, co. Kildare, vice Coyne, resigned.

HUTCHINSON, T. S., L.R.C.P.Ed., M.R.C.S.E., has been appointed an Honorary Surgeon to St. Bartholomew's Hospital, Chatham.

MACDONALD, A., M.D., F.R.C.P.Ed., has been appointed a Physician to the Royal Maternity Hospital, Edinburgh, vice Ziegler, resigned.

MACDONNELL, M. A., M.D., C.M., has been appointed Medical Officer and Public Vaccinator for the No. 1 District of the Toxteth-park Township, vice Carter, deceased.

MACHIN, E. S., M.R.C.S.E., L.S.A.L., has been appointed Certifying Factory Surgeon for Erdington, vice Harvey.

MEREDITH, J. E., M.D., C.M., has been appointed Certifying Factory Surgeon for the Maidstone District, vice Owens, resigned.

ROBERTS, G. W., L.R.C.P.Ed. & L.M., L.F.P.S.G., L.S.A.L., has been appointed Medical Officer of Health for the Denbigh Urban Sanitary District.

RODGER, W., L.F.P.S.G., has been appointed Medical Officer and Public Vaccinator for the Parish of Galston, Ayrshire, vice Macleod, resigned.

WALKER, J. D., L.R.C.P.Ed., L.R.C.S.Ed., has been reappointed Medical Officer of Health for the Kirkham Urban Sanitary District, Lancashire, at £30 for one year.

WALKER, J. F., L.K.Q.C.P.I., has been appointed Medical Officer and Public Vaccinator for the No. 6 District of the Basingstoke Union, and Medical Officer of Health for the No. 6 Sub-district of the Basingstoke Rural Sanitary District, vice Sweeting, deceased.

WARREN, S., M.B., C.M., has been appointed Medical Officer for the Upton District of the Wirrall Union, Cheshire, vice Day, deceased.

WILMOT, R. E., M.B., L.R.C.P.L., M.R.C.S.E., has been appointed Medical Officer for the No. 2 District of the Petworth Union, Sussex.

Births, Marriages, and Deaths.

BIRTHS.

BATEMAN.—On the 21st ult., at Whitchurch, Oxon, the wife of Francis Bateman, M.B. Lond., of a son.

CARR.—On the 27th ult., at Apsley-place, Glasgow, the wife of Dr. William Carr, of a son.

DALY.—On the 24th ult., at Queen's-road, Dalston, London, the wife of Frederick H. Daly, M.D., of a daughter.

LAWTON.—On the 22nd ult., at Poole, Dorset, the wife of Herbert A. Lawton, L.R.C.P.L., M.R.C.S.E., of a son.

MALLAM.—On the 26th inst., at Shepherd's-bush, the wife of W. Prior Mallam, L.R.C.P.L., M.R.C.S.E., of a daughter.

NEWMAN.—On the 28th ult., at St. Mary's-gate, Derby, the wife of Augustus Newman, M.B., of a son.

WALKER.—On the 25th ult., at Hotham House, Putney, the wife of Alexander Walker, M.B., C.M., of a son.

WATSON.—On the 24th ult., at Manor-road, Liscard, the wife of Thomas Boswall Watson, M.D., of a daughter.

MARRIAGES.

BOOTH—DEACON.—On the 22nd ult., at Farnworth, near Widnes, Lancashire, John Bennion Booth, M.R.C.S.E., of Beech House, to Esther, second daughter of the late Henry Duncon, Esq., J.P., of Appleton House, near Widnes.

BRIGGS—COOKE.—On the 8th ult., at St. Andrew's, Bath, George Chapman Briggs, M.B., to Emma Mary Elizabeth, daughter of H. E. Cooke, Esq.

DEATHS.

ATKINSON.—On the 23rd ult., at Lower Gardiner-street, Dublin, Robert Atkinson, M.R.C.S.E.

HADLEY.—On the 24th ult., at Colmore House, Handsworth, John Joseph Hadley, M.R.C.S.E., aged 71.

LANGLEY.—On the 24th ult., at Park-street, Worksop, William David Langley, M.D., aged 76.

MALAN.—On the 23rd ult., at Montreux, Switzerland, Henry Victor Malan, M.D., aged 62.

RITCHIE.—Found dead, on the 15th ult., on a public road at Billinghay (apparently from exposure), George Ritchie, M.D., aged 72.

SHUTE.—On the 27th ult., at Lutton-place, Edinburgh, Robert Shute, Esq., M.R.C.S., aged 65.

THOMPSON.—On the 12th ult., at Hull, John Thompson, M.D., aged 42.

WHITAKER.—On the 14th ult., at Springwell House, Blackburn, Edmund F. Whitaker, L.R.C.P.Ed., aged 45.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages and Deaths.*

Notes, Short Comments, and Answers to Correspondents.

MISUSE OF MORTALITY STATISTICS.

UNDER the heading, "A Healthy Parish," *The Times* a few days ago published a letter from the Vicar of Nocton parish, near Lincoln, containing some mortality statistics for that parish, which he and the Editor of *The Times* consider sufficiently remarkable for notice in the columns of that journal. There is a growing tendency to call attention to, and to draw deductions from, mortality statistics for small populations, which it is desirable in the interests of useful statistics to protest against. In the first place, it cannot be too generally known that conclusions drawn from mortality statistics, without due regard to the population to which the statistics relate, is apt to be misleading, and that, moreover, the vital statistics for small populations should always be distrusted. Nothing can well be more mischievously deceptive than a form of paragraph to which we are treated *ad nauseam* on the advent of severe winter weather. It is useless enough to be informed that on such and such days the obituary of *The Times* announced the deaths of 47 persons whose ages amounted to 2537 years, averaging rather more than 75 years for each person. These figures and average ages are, however, frequently quoted as evidence of the satisfactory sanitary condition of the country at large or of a special locality, in which the cold weather has been exceptionally fatal to elderly persons. The misuse of statistics can scarcely perpetrate a greater absurdity. The deaths of a few old persons cannot prove the longevity of a population unless the mean age of the decedents is maintained at a high figure through a long series of years. Mortality statistics, unless considered with due reference to the living population to which they relate, are comparatively valueless. With regard to the small Lincolnshire parish of Nocton, the Vicar states the population to be "just over 600"; but as it declined from 537 in 1861 to 513 in 1871, 500 is probably now more nearly the correct figure. On this population the annual rate of mortality would be 14 per 1000 in the three years, without counting any deaths that may have occurred in the union workhouse. This is not a remarkably low death-rate for an agricultural parish. The fact, moreover, that more than half the deaths in the three years were of infants under six months of age is scarcely creditable to the social and sanitary condition of the parish.

W. W.—Application might be made to the Secretaries of two or three of the principal hospitals for information as to the facilities offered to volunteer nurses for learning their business in the wards.

Mr. Eugene Goddard.—We are indebted for the communication.

NOTES ON A CASE OF SEVERE INFANTILE CONVULSIONS

To the Editor of THE LANCET.

SIR,—Thinking the enclosed case might be of some interest to the readers of THE LANCET, perhaps you will kindly grant space for the same.

On February 2nd I was called to see an infant, twelve days old, that weighed six pounds two days after birth. She was suddenly seized with violent convulsions of nearly every muscle in her body, the head being violently jerked backwards and forwards; face alternately red and livid; respiration very irregular and laborious; features fearfully distorted, and accompanied by involuntary discharge of fæces and urine; these symptoms having gone on more or less for three hours without a decided intermission. On endeavouring to find a cause, I could not; the bowels had acted regularly up to the attack; the remains of the umbilical cord were normal; the appetite was not impaired, and the child had nothing but its mother's milk since its birth. The sister died from convulsions when about twelve months old. I ordered the usual remedies, such as cold to the head, the feet to be placed in hot mustard-and-water, &c., but they were of no avail, the symptoms being as persistent as before. I gave the infant an inhalation of equal parts of chloroform and ether, producing complete insensibility, which I kept up for twenty-five minutes, the chaplain christening the child during the administration of the anæsthetic. The inhalation being discontinued, the convulsions were replaced by apparently a sound natural sleep, lasting upwards of three hours and a half, after which some slight muscular twitching was visible, when I administered two grains of chloral hydrate, which had the desired soporific effect, the infant waking up bright and cheerful, without a sign or symptom of muscular twitching, and has remained in perfect health up to this date.

Your obedient servant,
Whittingham County Asylum. J. R. PARKINSON, M.R.C.S.

Dr. W. W. Young.—An employer is not liable, in the absence of a contract making him so, for injuries sustained by an employé in the legitimate discharge of his duty, provided that reasonable precautions have been taken by the employer in the way of providing proper tackle and machinery and competent fellow-workmen. Any risks existing under these conditions are accepted by a workman.

Mr. L. C. Javal might refer to the valedictory address of Mr. Spencer Wells on retiring from the Samaritan Hospital. See THE LANCET of Dec. 15th, 1877.

Spur.—The author of the pamphlet is notorious for his unprofessional publications.

THE OVERCROWDING OF WORKHOUSES.

As was to be expected, metropolitan pauperism is now greatly on the increase, and the workhouses are more than ever overcrowded. Thus in the visitors' book at the St. Luke's Workhouse we find a recent outcry made by Dr. Bridges, Local Government Board inspector, stating that the inmates considerably exceeded the certified number the workhouse should hold. Consequently "the two oakum rooms were much overcrowded, and the atmosphere in them was most oppressive." Dr. Bridges also complains of the ventilation of the laundry, but remarks that the opening of the new infirmary will soon give relief. At Lambeth the overcrowding is so great that the reopening of the old workhouse in Princes-road was suggested. This, however, was opposed on the ground that it should be sold to relieve the ratepayers from the burden imposed upon them when the new infirmary was built; and this reason was probably brought forward to justify the refusal of the offer made by the guardians of St. George's-in-the-East to rent a portion of their abandoned workhouse. Altogether we fail to see that anything has been successfully attempted to meet the extra strain, which, as it was fully expected, should have been met by energetic measures.

Mr. Price is thanked for a copy of the Rules of "The South London Medical Aid Institute," which will be considered.

DETACHMENT OF THE RETINA.

To the Editor of THE LANCET.

SIR,—Dr. Wolfe pleads ignorance of the existence of the *Centralblatt für praktische Augenheilkunde*, and therefore of its article describing the operation for detachment of retina and its favourable results. We must allow him to extend his plea so as to include v. Graefe's "Archiv für Ophthalmologie," and also the well-known and justly celebrated "Handbach der gesammten Augenheilkunde," edited by Graefe and Scemisch; for in the 1877 vol. of the first there is an article by Dr. v. Kries, describing the operation, its history and modifications, and reporting fully several cases. And in the second, Professor Arlt, in his article on Eye Operations (published in 1874), says: "The puncture of the sclerotic .....has been used by Kittel and myself with good results in cases of recent detachment of retina. After the escape of the fluid through the sclero-choroidal wound, the retina reapplied itself to the choroid, and remained there. Very recently Wecker also has pronounced in favour of this method of letting out the subretinal fluid, which had previously been practised by Sichel." Thus it appears that the operation is widely known, and that it has been successful. Moreover, whatever credit may be its due is ascribed by all ophthalmologists to Sichel. A communication recently received from the son of this late distinguished surgeon says: "My father was the first to perform the operation of puncture in cases of detachment of retina. He made a large puncture with a broad and straight iridectomy knife as near as possible to the equator of the eye, and in its direction in the lower part of the sclerotic, the patient looking up as much as possible all the time. Thus he let out a little yellowish liquid. The patient recovered very well, though only for a few months, when the detachment recurred."

Though Dr. Wolfe states that he was present, I think the facts may readily have slipped his memory, especially as I find that in your journal of Jan. 4th he quotes my letter as saying that Dr. Pufahl performed the operations in December, 1877; whereas it was clearly stated by me that Dr. Hirschberg performed the operations in 1877, and that Dr. Pufahl simply reported them in the *Centralblatt* of December of that year.

Here I may also on my part plead ignorance of the condition he speaks of as "chronic scrofulous engorgement of all the tissues of the eye," and I venture to say that no such disease is known, at all events in modern ophthalmology.

I should have been glad if through Dr. Wolfe the credit of this operation had fallen to British ophthalmology, and I therefore much regret that he has arrived on the scene too late by twenty years to be justified in calling it a "new" operation on his part, or in claiming to "rescue this from the list of hitherto incurable diseases."

I am, Sir, your obedient servant,
Moorfields Hospital Museum, Jan. 21st, 1879. W. A. BRAILEY.

*** We cannot insert any more letters on this subject.—ED. L.

Viator. — Apply at the Office of the Crown Agents for the Colonies, Downing-street; or at the Agents-General of the various Australian Colonies, most of whose Offices are in Victoria-street, Westminster. *Vide* the Post-office Directory.

Mr. Arthur G. Keogh.—Against our custom.

CLOSURE OF WOUNDS.

To the Editor of THE LANCET.

SIR,—Through your journal I wish to make known a mode of drawing the edges of a wound together by plaster, without covering the wound itself.

Two parallel (or differently arranged) strips of metal or other suitable material, connected in some part of their length—say at each end, and the connexion somewhat arched,—are placed so that the axis of the wound lies between them. Suitable strips of plaster are made adherent to the skin on either side, and traction applied so that the cut edges are approximated. Then the plaster is attached to, or connected with, the parallels; thus the wound is closed, and the seam of it exposed to view. This shows the principle of the plan. The details vary with the form and arrangement of the parallels, whose action should resemble that of well-applied fingers in keeping the wound closed. The possible modifications of the parallels are many; and if surgical mechanicians go into them, the best forms may be soon arrived at, and then easily attainable.

I am, Sir, your obedient servant,
Kenley, Surrey. E. DIXEY, M.D.

MEDICAL MEN AND THE COUNTY COURT.

WE are frequently receiving papers with reports of actions in the County Court to recover charges for medical attendance. Generally the decision of the Judge is favourable to the medical man, as indeed the clear merits of the case indicate that it should be. Two such instances are just before us. The Judge ruled in one case that the mother, a widow, was liable to the surgeon for an attendance on her son, who was of age, because she had requested the surgeon's services. Medical men having unreasonable and ungrateful debtors do a service to their professional brethren as well as to themselves by bringing such actions, and they do no slight service also to the defendants. There is nothing at once more mean and unjust than to seek the services of a medical practitioner in the urgencies of disease, with all sorts of promises to pay, and when the disease is removed to deny the debt, or make every conceivable excuse for shirking the payment of it. The ingratitude of the cured is an old story; but it does not grow less unreasonable, and though we regret that it should ever be necessary for medical men to go into a County Court, it is a lesser evil than letting such patients go unrebuked.

D. E.—There is no impropriety in medical men who have attended a case in consultation asking each other for information in the event of any irregularity in the payment of fees. B.'s question was perhaps rather inquisitive in form; but he was quite entitled to information and advice from A.

Mr. Davis.—Wards for the purposes named exist in connexion with the larger general hospitals.

Dr. M'Naughton Jones shall receive an early reply.

THE FIRST SOUND OF THE HEART.

To the Editor of THE LANCET.

SIR,—The interesting experiments by Professor Arnold, published in the *New York Medical Journal* (April, 1878), and mentioned in THE LANCET (May 11th, 1878), seem to indicate that the valves have nothing to do with the first sound of the heart, and that it is to the muscular element alone we must look for an explanation of its production. We have, therefore, to decide between three theories which have been advanced concerning the muscular structure of the heart—viz., the sound produced by the *contraction* of its muscular fibres; secondly, that produced by the *friction* of its muscular walls; and lastly, that produced by their *collision*.

I was not aware when I put forward the collision theory that it had ever been mentioned before. Dr. Warren's letter, however (THE LANCET, Jan. 26th, 1878), directed my attention to the experiments of the Dublin and London Committees appointed by the British Association to experiment and report upon the sounds of the heart (fifth and sixth Reports, British Association, 1835 and 1836). On referring to these I found that one of the theories considered by the Dublin Committee was that of *friction* of the internal surfaces of the ventricles against each other. That it was not *collision* is, I think, clearly shown at page 248 of the same Report (1835), where, in describing the experiments, it is stated that the internal surfaces of the ventricles were rubbed together, and also that the finger was rubbed against the internal surface of the ventricular wall, with the effect of producing a sound, similar, in the opinion of the Committee, to the first sound of the heart. This theory they rejected on the ground that, if friction did occur, it occurred too late to account for the production of the first sound. I have repeated the experiment, and cannot trace any resemblance to the first sound. The London Committee, however, did consider the collision theory, and very summarily rejected it from the following experiments:—"The heart being grasped firmly in the hand, after separation from its attachments, and while immersed in blood, gave the first sound distinctly." The pressure in this case must, in the opinion of the Committee, have prevented collision between the opposite internal surfaces of the organ (page 269). A finger was also passed through the auriculo-ventricular orifice to the bottom of the left ventricle, and pressure applied by the other hand to the outside of the right ventricle, when, on applying the stethoscope, the first sound was distinctly heard.

With all respect for the opinion of the Committee, I must say that neither of these experiments precludes, in my estimation, the possibility of the occurrence of collision. In the first experiment the effect of pressure so applied is doubtful; and, in the second, there is simply the substitution of one solid body, the finger, for part of another, the wall of the ventricle.

In reference to the contraction theory, it must, I think, be admitted that experiments made upon the living subject, with a view to determine whether or not the muscles of the trunk and extremities emit any sound in contracting, are not to be depended upon, on account of the impossibility of distinguishing between the sounds produced by the friction of surrounding and adjacent parts and those which are said to be produced by the contraction of muscle. Dr. Halford's experiments should be mentioned here. He, having "exposed the heart in a large dog under chloroform, artificial respiration being kept up, found that by suddenly compressing the superior and inferior venæ cavæ and pulmonary veins he could abolish completely both the first and second sounds of the heart, although the organ contracted vigorously" (Carpenter's Physiology, American edition, page 305).

If, however, by the contractions of an isolated muscle, however induced, or by those of a heart so divided as to prevent collision of its walls with each other or with any other solid body on contraction, sounds were heard with the stethoscope resembling the first sound, there would no longer be the same difficulty in accepting the contraction theory. But until this result has been obtained by some such method as I have indicated, I, for one, must continue to be dissatisfied with the decision of the London Committee from the experiments I have mentioned, and to adhere to the collision theory.

I am, Sir, yours faithfully,
Mildmay-park, N., Dec. 14th, 1878. C. R. ILLINGWORTH, M.B.

MEDICAL CHARGES IN RAILWAY CASES.

IN a "railway case" which was tried lately at the Durham Assizes, Mr. Justice Lopes instructed the jury to state the amount of damages which they awarded in two sums, keeping the sum allotted for medical attendance separate from the rest. The medical expenses in the case amounted to £367 7s., but the jury allowed only £152 5s. The medical charges were considered by the Judge to be too high, and his Lordship expressed an opinion that occasionally medical men would take the opportunity of "running up a bill" in these cases, well knowing that the Railway Company would have to pay. As it is not a pleasant thing for a medical man to have his account publicly stigmatised as exorbitant, it would be well if Mr. Justice Lopes would state explicitly where fairness ends and exorbitance begins. Since the plaintiff, who incurred and will have to pay the medical expenses, made no complaint of the medical charges, we very much doubt the power of the Judge to interfere; and if any of the medical men choose to insist on the full amount being paid, we believe they can do so, and recover in the County Court by an independent proceeding, unless they have made an agreement to the contrary.

Dr. M'Cook Weir's letter is in type, and will appear next week.

THE BRITISH MEDICAL BENEVOLENT FUND.

To the Editor of THE LANCET.

SIR,—At the annual general meeting in connexion with the above Fund, the following resolution was unanimously adopted:—

"That the best thanks of this meeting be tendered to the Editor of THE LANCET for his kindness in permitting an appeal to the profession to be made in that paper.

I have the honour to be, Sir, your obedient servant,

MALCOLM A. MORRIS, Hon. Sec.

Montagu-square, Hyde-park, Jan. 27th, 1879.

The Clerk of the Burnley Union.—We have read the paper sent, and see nothing in it to change the judgment already pronounced on the case. It is not the fact "it would be impossible" for a lunatic to go through even very considerable bodily exertion "with five broken ribs." Everyone accustomed to the care of the insane must be well aware that injuries are disguised and pain disregarded in the most extraordinary manner by patients suffering under delusions. The use of any mechanical restraint in a workhouse is an offence against humanity, and ought not to be tolerated. Violent patients should be instantly and carefully removed to an asylum.

Mr. P. J. Maltzker should consult a physician.

PUERPERAL CONVULSIONS.

To the Editor of THE LANCET.

SIR,—I shall be happy to add my small experience to that of Mr. Vincent's on the above subject.

On July 12th, 1877, I was summoned to Mrs. C——, married, aged twenty-two, whom I had been engaged to attend in her confinement (first), which was expected some six weeks later. I found her lying on the floor, quite unconscious, breathing heavily, her face and neck being very much congested. I was informed that she had just been attacked by a severe fit. No history of previous attack, and had not complained of illness, but it had been noticed that her face had appeared puffed for the last morning or two. I ordered her removal to bed, cold applications to the head, and a mixture containing twenty grains of bromide of potassium in the dose, to be taken every three hours should she recover consciousness. On vaginal examination, there was no sign of labour having commenced. Some two or three hours afterwards her condition was much the same, she having had one or more severe fits. I called in to consultation Dr. A. V. Maybury, of Commercial-road, to whose able assistance on that occasion I owe a great deal, and the patient a great deal more. Leeches were applied to each temple, and the flow of blood encouraged by warm fomentations. Condition not improved; convulsions, if anything, stronger. Resolved to induce labour. The os was first dilated with tents, and then with Barnes's bags; the membranes ruptured with a sound, and the child, which was dead, delivered with great difficulty by version. Chloroform was given on the occurrence of each convulsion with marked benefit. The time occupied from the first introduction of tents to the completion of delivery was seven or eight hours. No recurrence of the convulsions after delivery. The woman the next morning felt quite well, there being some confusion of thought and loss of memory. The urine on the 12th was about one-third albumen, but on the following day there was but just a trace. She has since given birth to a healthy child, the labour being natural.

The difference between Mr. Vincent's case and my own seems very little, except that he was able to induce labour far more quickly, that he did not use chloroform, and that the convulsions recurred after delivery. The one remarkable fact in my case was the periodicity of the convulsions, which recurred regularly every two hours to the minute.

Yours faithfully,

Portsmouth, Jan. 21st, 1879. A. V. FORD, L.K.Q.C.P.

IT was recently stated at a meeting of the guardians of the North Dublin Union that the registration of still-born children as deaths was one of the causes of the high death-rate in Dublin; but the Registrar-General has shown that they are not registered in Ireland either as births or deaths.

Mr. C. Roberts.—We decline to be drawn into a controversy respecting the character of the review or the ultimate value of the book. One letter has been allowed to appear without note or comment; the favour cannot be extended to a second.

Le Verdad.—We are not familiar with works on heterodox medicine.

DUBLIN HOSPITAL SUNDAY FUND.

THE Committee of Distribution have resolved to divide the sum of £2975 amongst the fifteen hospitals which participate in the Fund this year. The principle upon which the distribution takes place is similar to that of previous years—viz., two-thirds according to the amount of voluntary subscriptions, and the remaining third for the work done for such contribution. The Committee are, however, of opinion that more value should be allowed for the work done by the hospitals, and they recommend that a Committee be appointed to consider whether a change in the rules is desirable by which the distribution should be made to depend to a greater extent than at present on the work done by the participating hospitals, as regards its extent, nature, and quality.

Mr. J. A. M'Munn.—The National Vaccine Establishment. Address, the Secretary, Local Government Board, New Government Offices, Charles-street, London, S.W.

L.R.C.P. Lond.—Meigs and Pepper's, Eustace Smith's, or Lewis Smith's.

"THE WOUNDED IN PEACE."

To the Editor of THE LANCET.

SIR,—You will be glad to know that the suggestions in your last issue for the extension of the instruction in first treatment of the injured to the police and others in civil life, have been anticipated. Some hundreds of the metropolitan police have, through the permission of Sir E. Henderson, received this instruction; and the whole force will receive it in due course under the Ambulance Department of the Order of St. John. The constabulary in Kent, Surrey, Devonshire, Worcestershire, Staffordshire, and the Northern Counties of York and Durham, have also commenced to receive this instruction. The work initiated, and now carried on so extensively by the Order, has really more bearing on the accidents of daily life than on the contingencies of war. I cannot write to your journal without saying that the success of the movement has been achieved mainly through the co-operation and chivalrous sympathy of the medical profession.

Your obedient servant,

F. DUNCAN, Major R.A.,
Director of Ambulance Department,
Jan. 27th, 1879. Order of St. John.

BACHELORS OF MEDICINE AND THE TITLE OF DOCTOR.

F.R.C.S. Eng.—1. The strictly proper title is "Mr."—2. He has not the right to style himself "Dr."—3. Our correspondent is not wrong in addressing a gentleman with the M.B. degree of any University as "Mr." At the same time it is fair to say that many persons feel that Bachelors of Medicine are so near the doctorate that, if any grant of the title by courtesy is to be excused, it is in the case of bachelors. Bachelors themselves, however, would do well to disclaim the title, if it were only the more to discredit those members of the profession who, on the strength of the most ordinary qualifications, use a title implying the possession of a degree.

Mr. Wm. Lambert's paper will be inserted.

THE NAVAL MEDICAL SERVICE.

To the Editor of THE LANCET.

SIR,—In reply to the invitation contained in your comments on a letter by a "Naval Medical Officer," which appeared in your last issue, I beg to state that I for one do not wish to see a civilian at the head of our department. Considering, however, that the present Director-General is not popular, and that he has held two terms of office, comprising a period of ten years, it is felt that it would be a gross injustice to the Naval Medical Service, and detrimental to the best interests of its officers, if he was not replaced in April next by the Senior Inspector-General on the active list, who is a competent and popular officer.

More cogent reasons could be adduced, which render it desirable that a change in the administration of the department should take place. These I reserve to myself the right at some future period to disclose, if necessary.

Yours &c.,

January, 1879. A MEDICAL OFFICER, R.N.

Mr. Michael J. Morrell.—We are obliged for the communication, and much interested in the subject of asylum management. The matter will be kept in mind, together with the suggestions.

Mr. Knapp.—We are not aware.

Dr. J. P. Lewis.—Address the inquiry to the Secretary or Dean.

LITHOFRACTEUR.

To the Editor of THE LANCET.

SIR,—Observing in your issue of the 25th instant a paragraph under the above heading, stating that a meeting had recently been held at the Moonta Mines, South Australia, for the purpose of protesting against the use of lithofracteur, which was stated to be highly injurious to the health of those who used it, we beg to inform you, as the patentees of lithofracteur, that the explosive compound therein referred to is not the lithofracteur manufactured by us, but is that made by a local and independent company. Our lithofracteur is universally admitted to be free from the drawback above alluded to. We trust you will be good enough to give the same prominence to this letter that you did to the paragraph in question, which is calculated seriously to prejudice our interests.

Your obedient servants,

Basinghall-street, Jan. 29th, 1879. KREBS, BROTHERS, & Co.

MEDICAL REGISTRATION AND CHANGES OF ADDRESS.

IT is to be hoped that members of the profession have carefully read the advertisement in our columns in reference to changes of address, additional qualifications, &c., and the importance of transmitting them to the Registrar without delay. The 14th section of the Act empowers the Council, through its Registrar, to write to gentlemen on the Register, inquiring as to change of address. In the event of no answer being returned within six months, the Council may erase the names of such gentlemen, and so deprive them of the powers and privileges of registered persons. Every practitioner should promptly intimate any change of residence.

AN APPEAL.

IN response to the advertisement in the last number of THE LANCET, the following contributions for the widow and children of the late C. J. Axford, Esq., of St. Leonards, have been received:—

Sir W. Jenner, Bart.	..	£5	5 0
Dr. Quain	..	5	0 0
Mrs. Spicer	..	21	0 0
T. B. Courtenay, Esq.	..	5	5 0
Geo. Wm. Hind, Esq.	..	5	5 0
H. W. George, Esq.	..	5	5 0
THE LANCET	..	2	2 0

Further contributions are earnestly requested.

DIPHTHERIA AND MILK.

To the Editor of THE LANCET.

SIR,—I was glad to see the relationship lately sought to be established between diseased milk and diphtheria questioned by Mr. Geo. Fleming in your issue of Jan. 25th.

In my own practice a large number of cases occurred, and in each case I could distinctly trace the co-existence of defective drainage; while in no instance was any change made in the milk-supply, yet milk was the chief food the patients took, and, with the exception of an infant eighteen months old, all recovered. To the use of lactic acid locally, with chlorate of potash, combined with sulphurous acid and spirits of nitrous ether, internally, I attributed the successful issue of the cases, some of which were exceedingly severe, and followed by paralysis and other sequelæ.

Yours obediently,
RICHARD NEALE, M.D. Lond.

Boundary-road, South Hampstead, Jan. 25th, 1879.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Sansom, London; Dr. Greenhow, London; Mr. Pick, London; Mr. Oelhasser, London; Mr. G. Brown, London; Mr. Edwards, Addlestone; Mr. E. Brown, Liverpool; Mr. Page, Dublin; Mr. Davis, Chatham; Dr. Bradbury, Cambridge; Mr. Southam, Manchester; Mr. McLean, London; Mr. Sansome, Cambridge; Mr. Jessett, Erith; Messrs. Holdernesse and Co., Manchester; Dr. Young, Aldershot; Dr. Nicholls, Chelmsford; Dr. Craigie, London; Mr. A. E. Kemp, London; Major Duncan, London; Mr. Lambert, Sunderland; Mr. Littlewood, Nottingham; Mr. Easley, Plymouth; Mr. Mäckzker, Brighton; Mr. Robertson, Bradbarn; Mr. Morris, London; Mr. Laval, Clapton; Mr. Price, London; Mr. A. M. Campbell, Liverpool; Mr. E. Goddard, Highbury; Dr. J. T. Jones; Dr. Parker, Liverpool; Mr. W. H. Smith; Mr. Jas. Startin; Mr. Hodgkin; Mr. Pitman; Mr. E. Jackson, Darlington; Mr. Austin, Hereford; Mr. Boyle; Mr. Young; Dr. Low, Wrexham; Mr. Somerton, Bristol; Mr. Panter; Mr. Broadhurst, Chelmsford; Messrs. Lang and Co.; Mr. Sprouls, Frome; Rev. A. Matthey, Bruges; Messrs. Krohbs Brothers and Co.; Dr. Read, Plymouth; Mr. Binker, Brighton; Dr. Thompson; Mr. Devoriall; Mr. Knapp, St. Andrews; Mr. Lewis; Mr. Price; Mr. Pimm, Guildford; Mr. May; Mr. Perry; Mr. Jones; Dr. E. Andrew; Dr. Wonkes; Mr. Jeaffreson, Newcastle-on-Tyne; Captain Benson, London; Mr. Harding, London; Mr. Lucas, London; Mr. Lough; Mr. James, Ramsgate; Dr. R. Neale, London; Mr. Galveth, London; Mr. Bright, Glastonbury; Mr. M'Munn, Wolverhampton; Dr. Weir, Leicester; Dr. Budhan, Glasgow; Mr. Frost, Derby; Mr. J. M'Munn, Belfast; Mr. Dean, Barnsley; Dr. Macewen, Glasgow; D. E.; Spur; J. W.; Michael F.; M.D., Eastbourne; The Editor of the *Cambridge Chronicle*; Justice; L.R.C.P.; Magister; La Verdad; B. E.; Non-professional; Assistant; Shareholder; M.D.; Electrization; Julius Cæsar; A Medical Officer, R.N.; Viator; L.M.; Staff Surgeon, R.N.; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. White, Kensington; Mr. Glover, Derrington; Mr. Hinchcliffe, Shrewsbury; Mr. Thomas, Mount Egerton; Mr. Wingrave, Coventry; Mr. Mallam, London; Mr. Cumberland, London; Mr. Bateman, Whitchurch; Dr. M'Naughten Jones, Cork; Messrs. Porteous and Co., Glasgow; Mr. Moore; Dr. Walton, Carlow; Mr. Tomlinson, Malden; Messrs. Swan and Proctor; Dr. Roberts; Dr. Hardwicke; Mr. Frampton; Mr. Hall; Dr. Johnson, Sedgley; Mr. Jones; Mr. Bullock, Warwick; Mr. Robb; Mr. Weston; Mr. Thomas; Mr. Schatcht; Mr. Watson; Mr. Hoare; Dr. Rose; Mr. Routh, Bridlington; Dr. Lister, Ashton; Mr. Davidson, Carlisle; Mr. Walters; Medicus, Gateshead; Ergatine; L. T., Brechley; G. H., Sheffield; Surgeon; Doctor; M.D., Hereford; Alpha, Rathcoolme; Hermes; A. F. H.; M.D., Clare; M. D. M.; Medicus, Hampstead; Hants; M.D., Manchester; Matron; J. C. A., Newcastle-on-Tyne; Midland; M.D., Banbridge; X.; M.D., Bolton.

Exeter and Plymouth Gazette, Chelmsford Chronicle, Newcastle Daily Chronicle, Essex Weekly News, Newcastle Daily Journal, Freeman's Journal, Lymington Observer, Rick, House and Home, Western Mail, Gibbon Evening Express, Essex Herald, &c., have been received.

METEOROLOGICAL READINGS.

(Taken daily at 9 a.m. by Steward's Instruments.)

THE LANCET OFFICE, Jan. 30th, 1879.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Wet Bulb	Dry Bulb	Solar Radiation in Vacuo	Max. Temp. Shade	Min. Temp.	Rain-fall.	Remarks at 9.0 A.M.
Jan. 24	30·01	E.	..	32	..	37	22	..	Overcast
,, 25	30·06	E.	..	32	..	35	29	0·05	Overcast
,, 26	30·17	E.	33	35	..	36	20	..	Overcast
,, 27	30·36	E.	25	26	..	37	24	..	Overcast
,, 28	30·41	E.	32	34	..	35	31	..	Overcast
,, 29	30·25	E.	34	34	..	37	30	..	Overcast
,, 30	30·30	E.	32	36	..	38	32	..	Overcast

Medical Diary for the ensuing Week.

Monday, Feb. 3.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.

ST. MARK'S HOSPITAL.—Operations, 9 A.M. and 2 P.M.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

MEDICAL SOCIETY OF LONDON.—8½ P.M. Lettsomian Lectures: Dr. J. C. Thorowgood, "On Bronchial Asthma."

Tuesday, Feb. 4.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 3 P.M.

ROYAL INSTITUTION.—3 P.M. Professor E. A. Schäfer, "On Animal Development."

PATHOLOGICAL SOCIETY OF LONDON.—8½ P.M. The following Specimens will be shown:—Spinal Cord from a Case of Infantile Paralysis; Section of the Cord from Cases of Infantile Paralysis; Warty Growth on the Tricuspid Valve, with Mitral Stenosis; three Specimens of Congenital Malformation of the Heart; Hypertrophic Cirrhosis of the Liver; Perforating Ulcer of Small Intestine after Ovariotomy; Acute Myelitis in an Infant; and other Specimens.

Wednesday, Feb. 5.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. MARY'S HOSPITAL.—Operations, 1½ P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1 P.M.

LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be exhibited by Dr. Hickinbotham, Dr. Galabin, and Dr. John Williams.—The President's Address.—Paper: Dr. Jas. Braithwaite, "On Digital Dilatation of the Os Uteri in Labour."

EPIDEMIOLOGICAL SOCIETY.—8½ P.M. Sir Joseph Fayrer, "On the Relation of Filaria Sanguinis Hominis to Endemic Disease in India."

Thursday, Feb. 6.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

ROYAL INSTITUTION.—3 P.M. Mr. J. H. Gordon, "On Electric Induction."

HARVEIAN SOCIETY.—8½ P.M. Mr. Toynan, "On Incontinence and Retention of Urine in Children."—Dr. Norman Kerr, "On the Mortality from Intemperate Drinking, and how best to arrive at the Truth."

Friday, Feb. 7.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

ROYAL INSTITUTION.—3 P.M. Rev. H. R. Haweis, "On Bells."

Saturday, Feb. 8.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

ROYAL INSTITUTION.—3 P.M. Mr. Reginald W. Macan, "On Leasing."

TERMS FOR ADVERTISING IN THE LANCET.

For 7 lines and under	£0 4 6	For half a page	£2 12 0
For every additional line	0 0 6	For a page	5 0 0

The average number of words in a line is eleven.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

N.B.—All letters relating to Subscriptions or Advertisements should be addressed to the Publisher.

Agent for the Advertising Department in France—
Mess. DE LOMBNE, 223, Rue Gamelle St. Germain, Paris.